PAPERS

LAID BEFORE THE

LEGISLATIVE COUNCIL

OF

CEYLON.

BENGAL SECRETARIAT
LIBRARY.

1870—1871.

COLOMBO:
PRINTED BY WILLIAM SKEEN, GOVERNMENT PRINTER,
CEYLON.

1871.

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PROCEEDINGS

OF THE

LEGISLATIVE COUNCIL.

BENGAL SECRETARIAT LIBRARY.

Wednesday, 28th September, 1870.

PRESENT.

HIS EXCELLENCY SIR HERCULES ROBINSON, K. C. M. G., President.

HON. MAJOR-GENERAL H. RENNY,
HON. H. T. IRVING,
HON. R. F MORGAN,
HON. J. DOUGLAS,
HON. G. VANE,
C. P. LAYARD, ESQ.,
H. S. O. RUSSELL, ESQ.,
LIEUT.-COLONEL J. G. JERVOIS, R. E.
T. B. STEPHEN, ESQ.,
G. D. B. HARRISON, ESQ.,
M. COOMARA SWAMY, ESQ.,
J. A. MARTENSZ, ESQ.,
E. J. DEHIGAME, ESQ.,
A. WISE, ESQ.,
D. WILSON, ESQ.,

1. MEMBERS SWORN.—The necessary Oaths were taken by the Hon'ble J. DOUGLAS and Lieut.-Colonel J. G. JERVOIS.

2. OPENING OF THE SESSION.—His Excellency the Governor opened the Session with the following Address :—

GENTLEMEN OF THE LEGISLATIVE COUNCIL,

I AM sure you share the grief which is felt at this moment, throughout the whole civilized world, at the deplorable events which are succeeding each other with such startling rapidity on the Continent of Europe.

Although far removed ourselves from the scene of this lamentable strife, its effect has been felt even here in the suspension of trade; but the prosperity of the Island rests, I think, upon a solid basis, and we may therefore confidently look for a compensating reaction when the telegraph shall convey to us, as I trust it soon may, the welcome intelligence of the restoration of peace.

The financial position of the Colony is most satisfactory. The revenue of last year, notwithstanding the gloomy forebodings which were at one time entertained with respect to it, proved to be quite an average one - yielding over £946,000, whilst the expenditure amounted only to £881,000, having been reduced as low as possible so as to create a reserve fund, for emergencies, of £50,000. The excess of revenue over expenditure on the year amounted to £65,000, and the total surplus balances of the Colony, on the 31st December last, exceeded £84,000.

The revenue of the current year, without Export duties, but inclusive of Railway receipts, was estimated at £1,085,700, and the expenditure at £1,081,600. It is thought, from the results of the first eight months, that the revenue will be quite up to the estimate, whilst there will probably be a slight saving on the expenditure. There is every reason to expect, therefore, that the close of the current year will shew a surplus cash balance of £100,000, which will enable you to dispose of £50,000 by a Surplus Funds Ordinance, without encroaching on the reserve required by Her Majesty's Government.

The revenue for next year may, I think, safely be estimated at £1,100,000; the ordinary expenditure, including Military and Sinking Fund contributions, and the exceptional items of a Census and a Steamer, may be taken at £870,000,—leaving a balance of £230,000 for Public Works. Of this, £110,000 will be absorbed in the usual upkeep and departmental charges, leaving a sum of about £120,000 available for appropriation to either new undertakings, or the advancement of works already in progress.

In disposing of this sum, the two great wants of the country, more food and increased facilities for locomotion, should, as in former years, be kept steadily in view.

The Irrigation scheme is working well, and if persistently carried out for the next few years will go far towards transforming the face of the country. Already seven works, irrigating 4,090 acres, have been successfully completed at a cost of £4,762—being an average acreable rate of £1 3*s.* 3*d.*, the repayment of which being spread over ten years, will involve an average annual charge on the land benefited of 2*s.* 4*d.* per acre. There are, in addition, sixteen works, either in

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progress or sanctioned, capable of irrigating 40,427 acres. The estimated cost of these works, for which the funds have already been voted, is £40,154, being an average cost of 19*s.* 10*d.* per acre, or an average annual charge on the land for ten years of less than 2*s.* an acre. The demands for Government assistance under the Ordinance are large and urgent,—chiefly from the Eastern and Southern Provinces, which appear at present to be the most promising fields for the development of rice cultivation. It is estimated that £120,000 can be profitably expended in these districts in the next five years, and probably £30,000 in the remaining four Provinces. But as this £150,000 could not be expended to advantage in less than five years, an annual grant of £30,000, which I think the revenue can well afford to bear, will be sufficient. I propose therefore to submit for your approval an appropriation for that amount in the votes of next year; and if you will only adhere to the policy thus sketched out for the four following years, you may reasonably hope by that time to have added nearly 200,000 acres of permanently irrigated land to the grain cultivation of the Island.

The main trunk road across the Island to Batticaloa—a work, in my opinion, second in importance only to the Railway -is progressing favourably, and may be opened throughout in less than two years. Since I proposed this scheme to you, four years ago, as the solution of the long-standing Badulla difficulty, a sum of £163,000 has been expended in bridging, opening, and improving different portions of the route between Colombo and Batticaloa. There remains now but 35 miles to be opened, to complete the communication of 236 miles from point to point. A further sum of £40,000 will be required for this purpose, towards which I propose to ask you to vote £25,000 in the estimates for next year. Of all the rice producing portions of the Island which I have visited, the Batticaloa district has struck me as the most promising. The country is generally healthy. There is an abundance of fertile land, a plentiful supply of water, and an unusually enterprising and industrious population. With a good Cart road, temporary assistance in carrying out Irrigation works, and easy terms for the acquisition of land, Batticaloa is, I believe, destined to become the chief granary of Ceylon.

The Railway continues to flourish beyond the most sanguine expectations which were formed of it, and I am enabled therefore to submit to you a proposal for an extension of the line to Nawalapitiya. The receipts between Colombo and Kandy this year will, it is now believed, reach £212,000. The working expenses will be only about 36 per cent. of the receipts, or £76,000, to which, however, must be added an expenditure for additional Station and other accommodation, properly belonging to Capital Account, of £9,000—making a total probable expenditure of £85,000. This will leave £69,000 for general revenue, after paying the contribution of £58,000 to the Sinking Fund. Taking therefore the cost of the 75 miles to Kandy in round numbers at £1,800,000, or £24,000 a mile, the profits are at present over 7½ per cent. on the original outlay.

Careful surveys and estimates are now being made of the proposed extension to Nawalapitiya, which will be laid before you as soon as they can be completed. The country is not adapted for a broad gauge Railway such as the main line, nor is a line of that character called for either by the nature or extent of the probable traffic. All that is required in the Coffee districts is cheap and certain transport. A high rate of speed is not necessary; and this being so, the great object to be kept in view in Railway extension in Ceylon is, to reduce the capital outlay as low as possible consistent with stability of construction and economy of working. An examination of the trace as far as it has gone leads to the belief, that a 3′ 6″ line can be made from Pérádeniya to Nawalapitiya in 17 miles, being a saving of two miles on the road, for from £200,000 to £210,000, or at about half the cost per mile of the main line.

If this be established, I think it can be shewn to you that the profits on the undertaking, even at the main line rates of charges, will not be less than £18,000 a year, which would yield over 8½ per cent. on a capital outlay of £210,000.

Viewed, therefore, as a mere investment, the extension promises to be a safe and remunerative speculation. But, apart from the direct return for the capital outlay, important results to both the public and individuals would be sure to follow from this improvement in the means of communication. The saving to the Planters in the neighbourhoods of Gampola and Nawalapitiya upon the cart rates of the existing traffic passing along the present road, would alone exceed £26,000 a year; whilst with cheap and certain transport into the very heart of the Coffee districts, brought within easy reach, too, of the great forest reserves in the Wilderness of the Peak, the resources of the country would assuredly be largely developed, both by the opening of new land, and by the increased productiveness of the existing estates through the facilities which would be afforded for improved cultivation.

The cost of the extension, if determined on, I would propose should be met as follows:—£50,000 from surplus balances, £50,000 from general revenue, in two annual instalments, and the balance—say £110,000—by the issue of 5 per cent. debentures upon the security of the general revenue of the Colony.

Thus, you will see, that Irrigation works, the Batticaloa road, and Railway extension, will together absorb £80,000 out of the £120,000 available for new undertakings. Fortunately, the liberal outlay which has taken place of late years in every direction upon new roads and bridges, has already met many of the most pressing wants of this description. The balance therefore at your disposal, although not large, will, I trust, be sufficient to enable you to proceed with the extension of the Dimbula and Dik Oya grant-in-aid roads,—with the improvement of the Ratnapura and Badulla road,—and with the continuation of the road in the Southern Province towards the new Coffee district of Morowakkóralé. I hope, also, that you will find no difficulty in providing the usual amount for

continuing the reforms and improvements which are in progress in the Hospitals and Prisons throughout the Island.

As regards Legislation, I have really little to propose to you. Five Sessions of more than ordinary legislative activity have added 105 Ordinances to the Statute Book; and beyond the annual Supply Bill, there remains no measure of any importance to be laid before you, except one for the consolidation and amendment of the Law of Insolvency, and, in connection with it, enactments relating to Property and Trustees, and General Mortgages.

A new edition of the Laws of the Island made up to the close of last Session, is now being printed in London, and will, I hope, be in your hands early next year.

The Ordinance No. 5 of 1868 makes provision for taking a Census of the population at such time as the Government shall think advisable, and it is now proposed, if you should provide the necessary funds, to make an enumeration of the inhabitants of Ceylon in April next year, simultaneously with the Census which will be taken at that time throughout Great Britain and Ireland, and, it is to be hoped, generally throughout Her Majesty's Empire.

The Educational policy of the Government, which I fully explained to you at the close of last Session, is being steadily carried into effect. Thirty-six new Village Schools have been already established, and provision for an additional number will be made in the votes of next year.

The Galle Harbour project is at a stand-still in consequence of the objections raised by the Public Works' Loan Commissioners in England to the wording of our local Ordinance, which it is thought does not, in its present shape, embody the provisions of the Imperial Act; and also, in consequence of professional differences at home as to the section and direction of the Breakwater required. I have suggested that an Engineer, who has had special experience of Harbour works, should be sent out to settle definitely on the spot the points in dispute; and if this suggestion be adopted, we may be able at the same time to obtain valuable advice as to the possibility of improving Colombo—the chief commercial shipping Port of the Island. This is now becoming a question of considerable importance, in view of the substitution of steamers for sailing ships, which the successful completion of the Suez Canal is likely to bring about in the carrying trade of the Eastern seas.

Her Majesty's Order in Council of the 18th June, 1869, legalizing the Rupee currency, will be brought into operation upon an early day—probably the 1st January next. Whether the public accounts of the Colony will from the same date be kept in rupees and cents, or in rupees, annas, and pie, is a point which has not as yet been finally determined. The Correspondence on the subject, when complete, will in due course be laid before you.

Since I last had the pleasure of meeting you, Ceylon has been honoured by a visit from one of the Queen's sons, and I think I may fairly congratulate you on the manner in which the event passed off. The hearty welcome with which the Duke of Edinburgh was everywhere received during his progress through the Island, could not but be gratifying to His Royal Highness personally, whilst it evinced at the same time the loyalty and attachment to their Sovereign of all classes of the community. Thanks to the cordial co-operation of all—Officials as well as Unofficials, and particularly of the Native Chiefs and Headmen—the arrangements made to enable the Prince to visit different localities, and to witness and take part in the sports which are peculiar to this country, were satisfactorily carried out. Demonstrations elsewhere may have been more brilliant and costly, but can scarcely have been more enthusiastic and sincere. His Royal Highness assured me, on leaving the Island, that he would carry with him a very pleasing recollection of his visit, and I am authorised by the Queen to express to you Her Majesty's satisfaction at the reception accorded to her son, and the proof thus afforded of the loyalty and attachment of the people of this country to her throne and person. I believe that good results have followed, and are likely to flow, from this visit. One permanent and valuable memorial of it is about to be raised by private munificence, which I must not omit to mention. If the "Alfred Model Farm" prove successful, as I trust it may, the Natives will have good reason to look back with pleasure and gratitude on the first visit to Ceylon of a son of our beloved Sovereign, in honour of whom this institution is to be established by two of their own countrymen.

With these observations, I leave you to the business of the Session, in the confident hope that through your labours it will be made productive of benefit to the Colony. For, although the proposals I have submitted to you to-day are not numerous, they are, I think, well calculated, under God's blessing, to consolidate and develope those elements of prosperity that already exist so largely amongst you, and for which we cannot be too devoutly thankful.

3. His Excellency the Governor having retired, the Chair was taken by the Hon'ble Major-General H. Renny.

4. ADDRESS IN REPLY TO HIS EXCELLENCY'S SPEECH.—The Colonial Secretary moved that the following gentlemen be appointed a Sub-Committee to prepare an Address in reply to His Excellency's Speech:—The Government Agent for the Western Province, the Surveyor-General, the Collector of Customs, Mr. J. A. Martensz, Mr. A. Wise, Mr. D. Wilson.

Seconded by the Queen's Advocate.—Carried.

The Council adjourned until Wednesday next, the 5th proximo.

LEGISLATIVE COUNCIL

Proceedings.

ORDER OF THE DAY.—*Wednesday, 5th October*, 1870.

Committee to bring up the Address in reply to the Speech of His Excellency the Governor.

The Colonial Secretary to move the First reading of the following Bills:—

"An Ordinance to amend the Ordinance No. 9 of 1869."

"An Ordinance to extend the provisions of the Ordinance No. 7 of 1848 to the Municipal limits of Kandy."

"An Ordinance for making provision for the Supplementary Contingent Charges for the year 1870."

PROCEEDINGS.—*Wednesday, 5th October*, 1870.

1. The Council met pursuant to adjournment. The Hon'ble the Major-General took the Chair
2. Proceedings of the last meeting read.
3. ADDRESS IN REPLY TO HIS EXCELLENCY THE GOVERNOR'S SPEECH.—The Government Agent for the Western Province having brought up the Address of the Council in reply to the Speech of His Excellency, it was read by the Clerk as follows:—

MAY IT PLEASE YOUR EXCELLENCY,

1. THE Legislative Council participate in the sorrow so generally felt throughout the civilized world for the deplorable events occurring in Europe, and for the lamentable sacrifice of human life. They trust that peace may soon be restored, and confidence and prosperity be thus re-established.

2. The Council are glad to hear that the revenue of the Colony is in a sound condition, and that there is a prospect of a still further improvement in the coming year.

3. It is gratifying to learn that the funds required for carrying out the various works of public utility, recommended by Your Excellency, are forthcoming, and that they are sufficient to admit of the extension of the Railway to Náwalapitiya, simultaneously with the execution of Irrigation works, in addition to those completed and in progress, the great value of which is now fully recognised.

4. Taking into consideration the very heavy expense which would attend the construction of a broad gauge Railway from Péradeniya to Náwalapitiya, the Council concur in the adoption of a narrower gauge, and trust that one of 3′ 6″ will be found suitable for all requirements. They also concur in the arrangements proposed for defraying the cost of the work, and are pleased to hear that so large a portion can be provided from surplus balances and general revenue, still leaving a sufficient margin for other purposes.

5. The Council learn with satisfaction that the road to connect Batticaloa with Badulla, commenced under Your Excellency's auspices, is advancing towards completion, and feel sure that it will greatly promote the agricultural prosperity of both districts, and will prove of general importance to the Island.

6. The Council hope that the amendments proposed in the existing Laws of Insolvency and General Mortgages will remedy ascertained defects, and are prepared to afford the subject their best attention: they are also prepared to make such provision as may be required to give effect to the "*Census Ordinance*," No. 5 of 1868.

7. The Council notice with pleasure that 36 new Village Schools have already been established, in accordance with the recent Educational policy of the Government, and that provision will be made for an additional number in the votes for next year.

8. The early receipt of the edition of the Ordinances of the Island, referred to by Your Excellency, is very desirable; and the arrival of the new Steamer, to re-establish communication between the several ports of Ceylon, will be greatly appreciated.

9. In view of the urgent necessity of providing suitable Harbour accommodation at Colombo, the Council are glad to hear that steps have been taken to obtain, on the spot, the advice of a specially experienced Engineer.

10. The Council are gratified that the reception so cordially given by all classes in the Colony to His Royal Highness the Duke of Edinburgh, has afforded satisfaction to Her Majesty the Queen, and that the Prince has carried away with him a pleasing recollection of his visit.

They trust that the "Alfred Model Farm," provided for in such a public-spirited manner by two Native gentlemen to commemorate that event, will prove successful, and become permanently beneficial to the Colony.

4. On the motion of the Colonial Secretary the words "on the spot" in the 2nd line of clause 9 were omitted, and the words "after personal inspection" were inserted after "advice" in the same line.

5. The Colonial Secretary moved that the Address as amended be adopted. Seconded by the Queen's Advocate.—Carried.

6. His Excellency the Governor having arrived, took the Chair.

7. The Hon'ble the Major-General read the Address of the Council in reply to the Governor's Speech.

8. The Governor replied as follows:—

GENTLEMEN OF THE LEGISLATIVE COUNCIL,

I thank you for this Address. I am glad to find that you are prepared to concur so fully in proposals which are, I think, calculated to advance the best interests of the Colony.

9. PAPERS.—The Colonial Secretary laid on the Table the following papers:—

(1.) Blue Book for 1869.
(2.) Administration Reports for 1869.
(3.) Correspondence relating to Railway Extension in Ceylon.
(4.) Estimated Receipts and Profit on a Railway from Péradeniya to Náwalapitiya.

10. AMENDED RAILWAY DEBT BILL.—On the motion of the Colonial Secretary, the Bill entitled "An Ordinance to amend the Ordinance No. 9 of 1869," was read a first time, and the second reading fixed for Wednesday, the 12th instant.

11. KANDY PALANQUEEN CARRIAGES BILL.—On the motion of the Colonial Secretary, the Bill entitled "An Ordinance to extend the provisions of the Ordinance No. 7 of 1848 to the Municipal limits of Kandy," was read a first time, and the second reading fixed for Wednesday, the 12th instant.

12. SUPPLEMENTARY SUPPLY BILL FOR 1870.—The Colonial Secretary, with permission, postponed the first reading of this Bill to Wednesday, the 12th instant.

The Council adjourned until Wednesday, the 12th instant.

ORDER OF THE DAY.—*Wednesday, 12th October*, 1870.

NOTICES OF MOTIONS.

Mr. WILSON.—To move for a Return shewing the Gross and Net amount of Revenue received from the Colombo Assessment Tax each year, since the establishment of the Colombo Municipality, and also of the yearly application of the funds so received.

Mr. WILSON.—To move for a Return of the Assessment Tax levied, or in course of being levied, for the support of the Police Station lately established at Já-ela, shewing Gross and Net amount.—Also a Return of the number of Police employed, and the pay of each person and cost of the Station.

The Colonial Secretary to move the first reading of the Bill:

"An Ordinance for making provision for the Supplementary Contingent Charges for the year 1870.

The Colonial Secretary to move the second reading of the following Bills:—

"An Ordinance to amend the Ordinance No. 9 of 1869."

"An Ordinance to extend the provisions of the Ordinance No. 7 of 1848 to the Municipal limits of Kandy."

PROCEEDINGS.—*Wednesday, 12th October*, 1870.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

2. Proceedings of the last Meeting read.

3. PAPERS.—The Colonial Secretary laid on the Table the following papers:—

(1.) Report on Wire Tramways by G. L. Molesworth, Esq., Director of Public Works.
(2.) Returns of Irrigation Works completed, and in progress or sanctioned by Government.
(3.) Lists of Labour rendered, and Works executed, in the several Provinces, during the year 1869, under the Road Ordinance, No. 10 of 1861.
(4.) Gaol Returns received from the several Fiscals, for the half-years ended December, 1869, and June, 1870.

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4. ASSESSMENT TAX, COLOMBO.—Mr. Wilson, pursuant to notice, moved for a Return shewing the Gross and Net amount of Revenue received from the Colombo Assessment Tax each year, since the establishment of the Colombo Municipality, and also of the yearly application of the funds so received.

Motion agreed to.

5. ASSESSMENT TAX, JA'-ELA.—Mr. Wilson, pursuant to notice, moved for a Return of the Assessment Tax levied, or in course of being levied, for the support of the Police Station lately established at Já-ela, shewing Gross and Net amount.—Also a Return of the number of Police employed, and the pay of each person and cost of the Station.

Motion agreed to.

6. SUPPLEMENTARY SUPPLY BILL FOR 1870.—On the motion of the Colonial Secretary, the Bill entitled "An Ordinance for making provision for the Supplementary Contingent Charges for the year 1870," was read a first time, and the second reading fixed for Wednesday, the 19th instant.

7. AMENDED RAILWAY DEBT BILL.—On the motion of the Colonial Secretary, the Bill was read a second time and considered in Committee. The Colonial Secretary having reported the Bill without amendments, the Report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown.

8. KANDY PALANQUEEN CARRIAGES BILL.—On the motion of the Colonial Secretary, the Bill entitled "An Ordinance to extend the provisions of the Ordinance No. 7 of 1848 to the Municipal limits of Kandy," was read a second time.

The Council adjourned until Wednesday, the 19th instant.

ORDER OF THE DAY.—*Wednesday, 19th October*, 1870.

NOTICE OF MOTION.

MR. WILSON.—To move for a Return of the number of Deaths which have occurred in each District of the Island from Cattle Disease or Murrain, during the first six months of 1870.—Also for a Statement of the measures, if any, which were taken by Government in each District, to prevent the spread of disease.

The Colonial Secretary to move the third reading of the Bill:—

"An Ordinance to amend the Ordinance No. 9 of 1869."

The Colonial Secretary to move the second reading of the Bill:—

"An Ordinance for making provision for the Supplementary Contingent charges for the year 1870." (Proposed to be referred to a Sub-Committee.)

The Council to go into Committee on the Bill:—

"An Ordinance to extend the provisions of the Ordinance No. 7 of 1848 to the Municipal limits of Kandy."

PROCEEDINGS.—*Wednesday, 19th October*, 1870.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

2. Proceedings of the last Meeting read.

3. REPORT OF LAW OFFICERS.—Read Letter from the Law Officers of the Crown, stating, that there was, in their opinion, no legal impediment to the execution by the Colonial Tribunals of the amended Railway Debt Ordinance, in the terms proposed.

4. CATTLE PESTILENCE.—Mr. Wilson, pursuant to notice, moved for a Return of the number of Deaths which have occurred in each District of the Island from Cattle Disease or Murrain, during the first six months of 1870.—Also for a Statement of the measures, if any, which were taken by Government in each District, to prevent the spread of disease.

Motion agreed to.

5. AMENDED RAILWAY DEBT BILL.—On the motion of the Colonial Secretary, the Bill was read a third time, and passed.

6. SUPPLEMENTARY SUPPLY BILL FOR 1870.—On the motion of the Colonial Secretary, the Bill was read a second time. The Council having gone into Committee, the Bill was ordered to be referred to a Sub-Committee, consisting of the Colonial Secretary, the Auditor-General, the Treasurer, Mr. Coomara Swamy, Mr. Wise, and Mr. Wilson.

7. KANDY PALANQUEEN CARRIAGES BILL.—On the motion of the Colonial Secretary, the Council went into Committee on this Bill. The Colonial Secretary having reported the Bill with amendments, the report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown.

The Council adjourned until Wednesday, the 26th instant.

ORDER OF THE DAY.—*Wednesday, 26th October,* 1870.

NOTICE OF MOTION.

Mr. COOMARA SWAMY.—To move that this Council be furnished with a Report by the Scientific Officers of the Public Works' Department as to the adaptability of a line of Railway of 3 ft. 6 in. gauge for the proposed extension from Péradeniya to Náwalapitiya.

The Colonial Secretary to move the third reading of the Bill:—

"An Ordinance to extend the provisions of the Ordinance No. 7 of 1848."

The Queen's Advocate to move the first reading of the following Bills:—

"An Ordinance to consolidate and amend the Law of Insolvency."

"An Ordinance to amend in certain respects the Law of Mortgage and Hypothec."

"An Ordinance to amend the Law of Property and to relieve Trustees."

PROCEEDINGS.—*Wednesday, 26th October,* 1870.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.
2. Proceedings of the last Meeting read.
3. REPORT OF LAW OFFICERS.—Read Letter from the Law Officers of the Crown, stating, that there was, in their opinion, no legal impediment to the execution by the Colonial Tribunals of the Palanqueen Carriages' Ordinance, in the terms proposed.
4. RAILWAY EXTENSION.—Mr. Coomara Swamy, pursuant to notice, moved that this Council be furnished with a Report by the Scientific Officers of the Public Works' Department as to the adaptability of a line of Railway of 3 ft. 6 in. gauge for the proposed extension from Péradeniya to Náwalapitiya.

   The Colonial Secretary replied.
5. PALANQUEEN CARRIAGES BILL.—On the motion of the Colonial Secretary, the Bill was read a third time, and passed.
6. INSOLVENCY BILL.—On the motion of the Queen's Advocate, the Bill entitled "An Ordinance to consolidate and amend the Law of Insolvency," was read a first time, and the second reading fixed for Wednesday, the 2nd proximo
7. GENERAL MORTGAGE BILL.—On the motion of the Queen's Advocate, the Bill entitled "An Ordinance to amend in certain respects the Law of Mortgage and Hypothec," was read a first time, and the second reading fixed for Wednesday, the 2nd proximo.
8. PROPERTY AND TRUSTEES BILL.—On the motion of the Queen's Advocate, the Bill entitled "An Ordinance to amend the Law of Property and to relieve Trustees," was read a first time, and the second reading fixed for Wednesday, the 2nd proximo.

The Council adjourned until Wednesday, the 2nd proximo.

ORDER OF THE DAY.—*Wednesday, 2nd November,* 1870.

NOTICES OF MOTIONS.

Mr. WILSON.—To move that it is very desirable that all cases of arrears as regards the furnishing of Title Deeds to the purchasers of Crown Lands, should be cleared off with as little delay as possible; and that, if possible, all Title Deeds shall be deliverable at certain Offices named, within three months from the payment of the last instalment of purchase money.

LEGISLATIVE COUNCIL.

Proceedings.

Mr. Wilson.—To move that it would be very advantageous to the Members of the Legislative Council to have easy access to the Imperial, Indian, and Island Blue Books, and other works containing information likely to be useful to them in their official capacity. That it is therefore desirable, that such Books, &c., should be arranged in Ornamental Book-cases in the verandah of the Council Chamber, instead of being buried, as at present, in a hot, dark room, called the Record Office, in which it is quite impossible for any person to sit and study such works; also that the Legislative Council Chamber, instead of being closed, as is ordinarily the case, should always be open during official office hours to the Members of Council, as a Reading and Writing room, a Punkah Peon being stationed in attendance. I therefore move, that the gracious sanction of His Excellency the Governor and of the Legislative Council be sought to such a valuable concession.

Mr. Harrison.—To move for a Return of all applications made for Exclusive Privileges to Inventors, under Ordinance No. 6 of 1859: giving dates on which applications were received at the Colonial Secretary's Office, dates on which the applications were laid before the Governor and Executive Council, and dates on which orders to file specifications were issued to applicants—and in cases where such orders have not been issued, the reasons why they have not been issued.

Mr. Coomara Swamy.—To move that a compilation be made of all the Bye-laws, Regulations, Proclamations, and Minutes, having now the force of Law in this Colony, and made either by His Excellency the Governor, the Executive Council, or other public bodies or Officers in pursuance of the authority vested in them by the Ordinances enacted by this Council from year to year.

The Queen's Advocate to move the second reading of the following Bills:—

"An Ordinance to consolidate and amend the Law of Insolvency." (Proposed to be referred to a Sub-Committee.)

"An Ordinance to amend in certain respects the Law of Mortgage and Hypothec." (Proposed to be referred to a Sub-Committee.)

"An Ordinance to amend the Law of Property and to relieve Trustees." (Proposed to be referred to a Sub-Committee.)

Proceedings.—*Wednesday, 2nd November*, 1870.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.
2. Proceedings of the last Meeting read.
3. Assent to Bills.—The Colonial Secretary announced to the Council, that His Excellency the Governor had given his assent to the following Ordinances:—

   "An Ordinance to amend the Ordinance No. 9 of 1869."

   "An Ordinance to extend the provisions of the Ordinance No. 7 of 1848."
4. Paper.—The Colonial Secretary laid on the Table Return of the Assessment tax levied or about to be levied at Já-ela, moved for by Mr. Wilson on the 12th October, 1870.
5. Title Deeds of Lands sold.—Mr. Wilson, pursuant to notice, moved that it is very desirable that all cases of arrears as regards the furnishing of Title Deeds to the purchasers of Crown Lands, should be cleared off with as little delay as possible; and that, if possible, all Title Deeds shall be deliverable at certain Offices named, within three months from the payment of the last instalment of purchase money.

   Debate ensued.

   Motion dropped.
6. Legislative Council Library.—Mr. Wilson, pursuant to notice, moved that it would be very advantageous to the Members of the Legislative Council to have easy access to the Imperial, Indian, and Island Blue Books, and other works containing information likely to be useful to them in their official capacity. That it is therefore desirable, that such Books, &c., should be arranged in Ornamental Book-cases in the verandah of the Council Chamber, instead of being buried, as at present, in a hot, dark room, called the Record Office, in which it is quite impossible for any person to sit and study such works; also that the Legislative Council Chamber, instead of being closed, as is ordinarily the case, should always be open during official office hours to the Members of Council, as a Reading and Writing room, a Punkah Peon being stationed in attendance. He therefore moved that the gracious sanction of His Excellency the Governor and of the Legislative Council be sought to such a valuable concession.

   Motion agreed to.

7. PATENTS.—Mr. Harrison, pursuant to notice, moved for a Return of all Applications made for Exclusive Privileges to Inventors, under Ordinance No. 6 of 1859: giving dates on which applications were received at the Colonial Secretary's Office, dates on which the applications were laid before the Governor and Executive Council, and dates on which orders to file specifications were issued to applicants—and in cases where such orders have not been issued, the reasons why they have not been issued.

Motion agreed to.

8. COMPILATION OF PROCLAMATIONS, &c.—Mr. Coomara Swamy, pursuant to notice, moved that a compilation be made of all the Bye-laws, Regulations, Proclamations, and Minutes, having now the force of Law in this Colony, and made either by His Excellency the Governor, the Executive Council, or other public bodies or Officers in pursuance of the authority vested in them by the Ordinances enacted by this Council from year to year.

Motion by leave withdrawn.

9. INSOLVENCY BILL.—On the motion of the Queen's Advocate, the Bill was read a second time. The Council having gone into Committee, the Bill was ordered to be referred to a Sub-Committee, consisting of the Colonial Secretary, the Queen's Advocate, the Auditor-General, Mr. Coomara Swamy, Mr. Martensz, and Mr. Wise.

10. GENERAL MORTGAGE BILL.—On the motion of the Queen's Advocate, the Bill was read a second time. The Council having gone into Committee, the Bill was ordered to be referred to a Sub-Committee, consisting of the Colonial Secretary, the Queen's Advocate, the Auditor-General, Mr. Coomara Swamy, Mr. Martensz, and Mr. Wise.

11. PROPERTY AND TRUSTEES' BILL.—On the motion of the Queen's Advocate, the Bill was read a second time. The Council having gone into Committee, the Bill was ordered to be referred to a Sub-Committee, consisting of the Colonial Secretary, the Queen's Advocate, the Auditor-General, Mr. Coomara Swamy, Mr. Martensz, and Mr. Wise.

The Council adjourned until Thursday, the 10th instant.

ORDER OF THE DAY.—*Thursday, 10th November*, 1870.

NOTICE OF MOTION.

MR. WILSON.—To move that a select Committee of this Council be appointed with full powers to enquire into the working of the Colonial Store Department, and also as to whether the present buildings, and the locality in which they are situated, are suitable for the storage of the goods required by that Department; also to enquire into the Crown Agents' operations as regards all supplies of goods obtained through them on account of this Colony.

The Colonial Secretary to move the first reading of the Bill:—
"An Ordinance for making provision for the Contingent Services of the year 1871."

PROCEEDINGS.—*Thursday, 10th November*, 1870.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.
2. Proceedings of the last Meeting read.
3. POSTPONEMENT.—COLONIAL STORE DEPARTMENT. Mr. Wilson, with leave, postponed the motion on this subject standing in his name, until the next meeting of Council.
4. SUPPLY BILL, 1871.—On the motion of the Colonial Secretary, the Bill entitled "An Ordinance for making provision for the Contingent Services of the year 1871," was read a first time, and the second reading fixed for Wednesday, the 16th instant.

The Council adjourned until Wednesday, the 16th instant.

ORDER OF THE DAY.—*Wednesday, the 16th November*, 1870.

NOTICE OF QUESTION.

MR. COOMARA SWAMY.—To ask whether Government intended to adopt any steps for maintaining in force those Proclamations which, for obvious reasons, it is essential to keep alive, yet which, in consequence of the provisions of the 4th clause of the Ordinance No. 6 of 1867, will lose their legal effect as soon as the new edition of the Legislative Enactments is published early next year.

LEGISLATIVE COUNCIL.

Proceedings.

NOTICE OF MOTION.

MR. WILSON:—To move that a Select Committee of this Council be appointed, with full powers to enquire into the working of the Colonial Store Department, and also as to whether the present buildings, and the locality in which they are situated, are suitable for the storage of the goods required by that Department; also to enquire into the Crown Agents' operations as regards all supplies of goods obtained through them on account of this Colony.

The Colonial Secretary to move the first reading of the Bill:—

"An Ordinance to prolong the duration of the Ordinance No. 12 of 1869."

The Colonial Secretary to move the second reading of the Bill:—

"An Ordinance for making provision for the Contingent Services of the year 1871." (Proposed to be referred to a Sub-Committee.)

PROCEEDINGS.—*Wednesday, 15th November,* 1870.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.
2. Proceedings of the last Meeting read.
3. PAPER.—The Colonial Secretary laid on the Table Circular Despatch from the Secretary of State, of the 17th October, 1870, on the subject of Compulsory Vaccination.
4. POLICE FORCE AT BENTOTA AND GALKISSA.—Mr. Coomara Swamy presented a Petition from certain inhabitants of Bentota, praying for the withdrawal of the Police Force at that station, and a Petition from certain inhabitants of the village Attidiya, under the Pallé Pattu in Salpiti Kórale, praying that they may be exempted from the tax levied for the maintenance of a Police Force at Galkissa.

   Petitions received.
5. POLICE AT JÁ-ELA.—Mr. Wilson presented Petitions from the Proprietors or Agents of Estates in the vicinity of Já-ela, and certain inhabitants of Welligampitiya and Kannuwana, in the Rágam Pattu of the Alut Kúru Kórale, complaining against the establishment of the Police Force at Já-ela

   Petitions received
6. PROCLAMATIONS.—Mr. Coomara Swamy, pursuant to notice, asked whether Government intended to adopt any steps for maintaining in force those Proclamations which, for obvious reasons, it is essential to keep alive, yet which, in consequence of the provisions of the 4th clause of the Ordinance No. 6 of 1857, will lose their legal effect as soon as the new edition of the Enactments in force is published early next year.

   The Queen's Advocate replied.
6. COLONIAL STORE DEPARTMENT.—Mr. Wilson, with leave, withdrew the motion on this subject standing in his name in the Order of the Day.
7. TRACTION ENGINES BILL.—On the motion of the Colonial Secretary, the Bill entitled "An Ordinance to prolong the duration of the Ordinance No. 12 of 1869," was read a first time, and the second reading fixed for Wednesday, the 23rd instant.
8. SUPPLY BILL, 1871.—On the motion of the Colonial Secretary, the Bill was read a second time, The Council having gone into Committee, the Bill was ordered to be referred to a Sub-Committee, consisting of the Colonial Secretary, the Auditor-General, the Government Agent for the Western Province, Mr. Harrison, Mr. Coomara Swamy, and Mr. Wilson.

   The Council adjourned until Wednesday, the 23rd instant.

ORDER OF THE DAY.—*Wednesday, the 23rd November,* 1870.

NOTICE OF MOTION.

MR. WILSON.—To move, that on the payment of the last instalment of purchase money and fees for Government land, that a receipt on a Two shillings and sixpence stamp, setting forth the particulars of the land and name of purchaser, with a tracing of the survey plan, should be granted to the purchaser, if required, on the payment of the amount of stamp; such paper to be given up to the Government on the conveyance being completed.

The Colonial Secretary to move the first reading of the Bill:—

"An Ordinance to amend the Ordinance No. 17 of 1869."

The Queen's Advocate to move the first reading of the Bill:—

"An Ordinance to amend the Ordinance No. 3 of 1870.

The Auditor-General to move the first reading of the following Bills:—

"An Ordinance for raising £150,000 on Debentures for the extension of the Railway from Péradeniya to Náwalapitiya."

"An Ordinance to apply a portion of Surplus Revenues to the extension of Railway Communication."

The Colonial Secretary to move the second reading of the Bill:—

"An Ordinance to prolong the duration of the Ordinance No. 12 of 1869."

PROCEEDINGS—*Wednesday, 23rd November*, 1870.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.
2. Proceedings of the last Meeting read.
3. PAPERS.—The Colonial Secretary laid on the Table the following papers:—
   (1.) Reports on Light Railways by G. L. Molesworth, Esq., Director of Public Works.
   (2.) Report upon Railway Extension to Náwalapitiya, with Abstracts of estimated Cost, by E. G. Strong, Esq., Chief Resident Engineer, Ceylon Railway.
   (3.) Further Correspondence relating to the Improvement of Galle Harbour.
4. SALE OF CROWN LAND.—Mr. Wilson, pursuant to notice, moved, that on payment of the last instalment of purchase moneys and fees for Government Land, a receipt, setting forth the particulars of land, number of lot, district, boundaries, number of acres, amount of money and fees paid in full, should be granted to the purchaser; this receipt to be returned on the Title being granted.

   Debate ensued.

   Motion dropped.

5. BILL AMENDING CUSTOMS ORDINANCE, 1869. On the motion of the Colonial Secretary, the Bill entitled "An Ordinance to amend the Ordinance No. 17 of 1869," was read a first time, and the second reading fixed for Wednesday, the 30th instant.
6. BILL AMENDING KANDYAN MARRIAGE ORDINANCE, 1870.—On the motion of the Queen's Advocate, the Bill entitled "An Ordinance to amend the Ordinance No. 3 of 1870," was read a first time, and the second reading fixed for Wednesday, the 30th instant.
7. RAILWAY EXTENSION BILL.—On the motion of the Auditor-General, the Bill entitled "An Ordinance for raising £150,000 on Debentures, for the extension of the Railway from Péradeniya to Náwalapitiya," was read a first time, and the second reading fixed for Wednesday, the 30th instant.
8. SURPLUS REVENUES BILL.—On the motion of the Auditor-General, the Bill entitled "An Ordinance to apply a portion of Surplus Revenues to the extension of Railway Communication," was read a first time, and the second reading fixed for Wednesday, the 30th instant.
9. TRACTION ENGINES BILL.—On the motion of the Colonial Secretary, the Bill was read a second time and considered in Committee. The Colonial Secretary having reported the Bill without amendments, the Report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown.

The Council adjourned until Wednesday, the 30th instant.

ORDER OF THE DAY.—*Wednesday, 30th November*, 1870.

NOTICE OF QUESTION.

MR. WILSON.—To enquire how much of the sum of £5,000 voted in the Supply Bill of 1870, for the Improvement of the Inland Navigation, has been spent up to the 1st October last, and upon what works the money has been expended, and whether by Contract or not.—Also to enquire the cause of delay in spending the money so voted, for works of urgent necessity.

LEGISLATIVE COUNCIL.

Proceedings.

Notice of Motion.

Mr. Wilson.—To move, that as the Galle Harbour Improvement Scheme has been abandoned, it is desirable that a well-known competent Engineer, specially accustomed to Harbour Works, should be obtained, with as little delay as possible, to report upon the feasibility and cost of providing Colombo with good Harbour accommodation.

The Colonial Secretary to move the second reading of the Bill:—

"An Ordinance to amend the Ordinance No. 17 of 1869.

The Queen's Advocate to move the second reading of the Bill:—

"An Ordinance to amend the Ordinance No. 3 of 1870.

The Auditor-General to move the second reading of the following Bills:—

"An Ordinance for raising £150,000 on Debentures for the extension of the Railway from Pérádeniya to Náwalapitiya."

"An Ordinance to apply a portion of Surplus Revenues to the Extension of Railway Communication."

Proceedings.—*Wednesday, 30th November,* 1870.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.
2. Proceedings of the last Meeting read.
3. Paper.—The Colonial Secretary laid on the Table Correspondence with the Municipal Council Colombo, respecting the Revenue derived from the Colombo Assessment Tax, and its expenditure, since the establishment of the Colombo Municipality.
4. Rakwa'na Road.—Mr Wilson presented a Petition from Planters, residents of Rakwána and Kolonna Kóralé, and others, praying that a vote may be taken for the construction of the proposed Road through the Rakwána District during the present Session.

   Petition received.
5. Inland Navigation.—Mr. Wilson, pursuant to notice, asked how much of the sum of £5,000 voted in the Supply Bill of 1870, for the Improvement of the Inland Navigation, has been spent up to the 1st October last, and upon what works the money has been expended, and whether by Contract or not.—Also the cause of delay in spending the money so voted, for works of urgent necessity.

   The Colonial Secretary replied.
6. Galle Harbour Improvement Scheme.—Mr. Wilson, pursuant to notice, moved that as the Galle Harbour Improvement Scheme has been abandoned, it is desirable that a well-known eminent Engineer, specially accustomed to Harbour Works, should be obtained, with as little delay as possible, to report upon the feasibility and cost of providing Colombo with good Harbour accommodation.

   Debate ensued.

   Motion dropped.
7. Bill amending Customs Ordinance, 1869.—On the motion of the Colonial Secretary, the Bill was read a second time. The Council having gone into Committee, the Bill was ordered to be referred to a Sub-Committee, consisting of the Queen's Advocate, the Treasurer, the Collector of Customs, Mr. Harrison, Mr. Wise, and Mr. Wilson.

8.—Bill amending Kandyan Marriage Ordinance, 1870.—On the motion of the Queen's Advocate, the Bill was read a second time and considered in Committee. The Queen's Advocate having reported the Bill with amendments, the Report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown.

9. Railway Extension Bill.—On the motion of the Auditor-General, the Bill entitled "An Ordinance for raising £150,000 on Debentures for the extension of the Railway from Pérádeniya to Náwalapitiya," was read a second time.
10. Surplus Revenues Bill.—On the motion of the Auditor-General, the Bill entitled "An Ordinance to apply a portion of Surplus Revenues to the extension of Railway Communication," was read a second time.

The Council adjourned until Wednesday, the 7th proximo.

Wednesday, 7th December, 1870.

The Council postponed, by order of His Excellency the Governor, to Wednesday, the 14th December, 1870.

ORDER OF THE DAY—*Wednesday, 14th December*, 1870.

NOTICE OF QUESTIONS.

Mr. COOMARA SWAMY.—To ask, in what manner have Government resolved to keep the Public Accounts in future,—in "Rupees and Cents" or in "Rupees, Annas, and Pie?"

Mr. COOMARA SWAMY.—To ask, why Government have as yet deferred to adopt any measures whereby the heavy expense and delay incident (under the existing system) to the Otty and Sale of Lands in the Jaffna Peninsula, could be obviated?

NOTICE OF QUESTION AND MOTION.

Mr. HARRISON.—To ask, if any Report on the condition of the large Masonry Viaduct between the 59th and 60th mile-posts on the Colombo and Kandy Railway has been received by the Government; and, if so, whether it will be laid on the Table of the Council, and information be given as to the action taken thereon.

If not, to move that a Report on the condition of the Viaduct in question be called for, and laid on the Table of Council at the next Meeting.

NOTICE OF MOTIONS.

Mr. HARRISON.—To move for the production of any Report or Memorandum by Mr. Molesworth, Director of Public Works, on a proposed Railway from Péradeniya through Dimbula, or any other project for Railway Extension, which has been submitted to Government, or may be found in the archives of the Department of Public Works; and that the same be laid on the Table of the Legislative Council.

Mr. HARRISON.—On the motion that the Council go into Committee on the Railway Extension Bill—To move as an amendment, that this Bill be referred to a Select Committee of this Council, to take evidence as to matters of fact, and scientific evidence as to the construction of any proposed extension of the existing Railway.

That all the evidence so taken shall from time to time be printed and laid on the table of this Council:—and

That the Select Committee shall report to this Council the conclusions they arrive at, based on the evidence so taken,

First, As to the Direction in which extension should be made.
Second, As to the point to which such extension should be carried.
Third, As to the Gauge which should be adopted for the extension, considering the country to be traversed, and the probable traffic.
Fourth, As to the probable Cost of the extension.
Fifth, As to the probable Traffic of the extension.
Sixth, As to the probable Profits, direct and indirect, which would accrue to the Public from such extension:—

And, if there be more than one project for Railway extension submitted to the Committee,

Seventh, As to the comparative merits of the different projects, and the comparative advantages which would accrue to the Public therefrom.

The Colonial Secretary to move the third reading of the Bill:—

"An Ordinance to prolong the duration of the Ordinance No. 12 of 1869."

The Queen's Advocate to move the third reading of the Bill:—

"An Ordinance to amend the Ordinance No. 3 of 1870."

The Colonial Secretary to move the first reading of the following Bills:—

"An Ordinance to amend the Tolls' Ordinance, No. 14 of 1867."
"An Ordinance to establish further Tolls."
"An Ordinance for regulating Measures used in sales of Gas."

The Council to go into Committee on the following Bills:—

"An Ordinance for raising £150,000 on Debentures for the extension of the Railway from Péradeniya to Náwalapitiya."

"An Ordinance to apply a portion of Surplus Revenues to the extension of Railway Communication."

The Sub-Committee to bring up their Report, and the Council to go into Committee, on the following Bills:—

"An Ordinance for making provision for the Supplementary Contingent Charges for the year 1870."
"An Ordinance to amend the Ordinance No. 17 of 1869."

LEGISLATIVE COUNCIL.

Proceedings.

PROCEEDINGS.—*Wednesday, 14th December*, 1870.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.
2. Proceedings of the last Meeting read.
3. REPORT OF LAW OFFICERS.—Read Letters from the Law Officers of the Crown, dated the 28th November, and 6th December 1870, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of the following Ordinances, in the terms proposed, viz :

   "An Ordinance to prolong the duration of the Ordinance No. 12 of 1869."
   "An Ordinance to amend the Ordinance No. 3 of 1870."

4. POLICE AT GALKISSA.—The Colonial Secretary presented a Petition from the inhabitants of Ratmalana, Galkissa, and other villages, complaining against the establishment of the Police Force at Galkissa.

   Petition received.

5. PAPER.—The Colonial Secretary laid on the Table the Twenty-seventh Report of the Department of Public Instruction.
6. DENOMINATION IN WHICH PUBLIC ACCOUNTS ARE TO BE KEPT.—Mr. Coomara Swamy, pursuant to notice, asked in what manner Government had resolved to keep the Public Accounts in future,—in "Rupees and Cents" or in "Rupees, Annas, and Pie?"

   The Colonial Secretary replied.

7. POSTPONEMENT.—OTTY AND SALE OF LANDS IN JAFFNA.—Mr. Coomara Swamy, with leave, postponed the question on this subject standing in his name in the Order of the Day, until the next meeting of Council.
8. VIADUCT ON THE RAILWAY LINE.—Mr. Harrison, pursuant to notice, asked, if any Report on the condition of the large Masonry Viaduct between the 59th and 60th mile-posts on the Colombo and Kandy Railway, had been received by the Government; and, if so, whether it would be laid on the Table of the Council, and information be given as to the action taken thereon; and if not, he moved that a Report on the condition of the Viaduct in question be called for, and laid on the Table of Council at the next Meeting.

   The Colonial Secretary replied, and the motion was agreed to.

9. RAILWAY EXTENSION.—Mr. Harrison, pursuant to notice, moved for the production of any Report or Memorandum by Mr. Molesworth, Director of Public Works, on a proposed Railway from Péradeniya through Dimbula, or any other project for Railway Extension, which has been submitted to Government, or may be found in the archives of the Department of Public Works; and that the same be laid on the Table of the Legislative Council.

   Motion agreed to.

10. TRACTION ENGINES BILL.—On the motion of the Colonial Secretary, the Bill was read a third time, and passed.
11. BILL AMENDING KANDYAN MARRIAGE ORDINANCE, 1870.—On the motion of the Colonial Secretary, the Bill was read a third time, and passed.
12. BILL AMENDING THE TOLLS' ORDINANCE, 1867.—The Queen's Advocate, with permission, postponed the first reading of this Bill until the next meeting of Council.
13. TOLLS' BILL. On the motion of the Queen's Advocate the Bill entitled "An Ordinance to establish further Tolls," was read a first time, and the second reading fixed for Wednesday the 21st instant.
14. GAS METER BILL.—On the motion of the Queen's Advocate, the Bill entitled "An Ordinance for regulating measures used in sales of Gas," was read a first time, and the second reading fixed for Wednesday the 21st instant.
15. RAILWAY EXTENSION BILL.—On the motion of the Auditor-General, the Council went into Committee on this Bill.

The Colonial Secretary moved that the Bill be considered clause by clause.

MR. HARRISON—Moved as an amendment that this Bill be referred to a Sub-Committee of this Council, to take evidence as to matters of fact, and scientific evidence as to the construction of any proposed extension of the existing Railway.

That all the evidence so taken shall from time to time be printed and laid on the table of this Council:—and

That the Sub-Committee shall report to this Council the conclusions they arrive at, based on the evidence so taken,

First, As to the Direction in which extension should be made.
Second, As to the Point to which such extension should be carried.
Third, As to the Gauge which should be adopted for the extension, considering the country to be traversed, and the probable traffic.

Fourth, As to the probable Cost of the extension.
Fifth, As to the probable Traffic of the extension.
Sixth, As to the probable Profits, direct and indirect, which would accrue to the Public from such extension:—

And, if there be more than one project for Railway extension submitted to the Committee.

Seventh, As to the comparative merits of the different projects, and the comparative advantages which would accrue to the Public therefrom.

THE COUNCIL DIVIDED.

Ayes.	*Noes.*
Mr. Dehigame.	Mr. Wilson.
Mr. Harrison.	Mr. Wise.
—	Mr. Martensz.
2	Mr. Coomara Swamy.
—	The Principal Collector of Customs.
	The Surveyor-General.
	The Government Agent for the Central Province.
	The Government Agent for the Western Province.
	The Treasurer.
	The Auditor-General.
	The Queen's Advocate.
	The Colonial Secretary.
	The Major-General.
	His Excellency the Governor.

Noes 14
Ayes 2
—
12

Majority of twelve against the motion, so the motion was lost.

On the motion of the Auditor-General, the consideration of the Bill was postponed to Wednesday next

16. SURPLUS REVENUES BILL.—On the motion of the Auditor-General the Council went into Committee on this Bill, and its consideration in Committee was postponed to Wednesday next.

17. SUPPLEMENTARY SUPPLY BILL FOR 1870.—The Colonial Secretary brought up the Report of the Sub-Committee on this Bill, which was read by the Clerk of the Council, and the Bill considered in Committee. The Colonial Secretary having reported the Bill with amendments, the Report was adopted; and on the motion of the Colonial Secretary, the Standing Rules of the Council were suspended, and the Bill was read a third time and passed.

18. BILL AMENDING CUSTOMS ORDINANCE, 1869.—The Queen's Advocate, with permission, postponed bringing up the Report of the Sub-Committee on this Bill, until the next Meeting of Council.

The Council adjourned to Wednesday the 21st instant.

ORDER OF THE DAY.—*Wednesday, 21st December*, 1870.

NOTICE OF QUESTION.

Mr. COOMARA SWAMY.—To ask, why Government have as yet deferred to adopt any measures whereby the heavy expense and delay incident (under the existing system) to the Otty and Sale of Lands in the Jaffna Peninsula, could be obviated?

NOTICE OF MOTION.

Mr. HARRISON.—To move for the production of any report which has been sent in to Government on the condition of the large Bridge lately erected at Ratnapura; and, if no such report has been received by the Government, that a report be called for, and presented to the Council.

The Queen's Advocate to move the second reading of the following Bills:—

"An Ordinance to establish further Tolls."

"An Ordinance for regulating Measures used in sales of Gas."

The Sub-Committee to bring up their Report on the Bill:

"An Ordinance to amend the Ordinance No. 17 of 1869."

The Council in Committee to consider the following Bills:—

An Ordinance for raising £150,000 on Debentures for the extension of the Railway from Péradeniya to Náwalapitiya.

"An Ordinance to apply a portion of Surplus Revenues to the extension of Railway Communication."

LEGISLATIVE COUNCIL.

Proceedings.

PROCEEDINGS.—*Wednesday, 21st December,* 1870.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.
2. Proceedings of the last Meeting read.
3. PAPERS.—The Colonial Secretary laid on the Table the following papers:

   CATTLE DISEASE.—Returns from the several Government Agents of the number of Deaths from Cattle Disease or Murrain during the first six months of 1870, moved for by Mr. Wilson on the 19th October, 1870.

   RAILWAY EXTENSION.—Correspondence with the Director of Public Works on a proposed Railway extension up the Kotmalé Ganga.
   Detailed Estimates of the cost of construction of the proposed Railway from Péradeniya to Náwalapitiya, giving the results per mile.
4. RAILWAY EXTENSION.—The Government Agent for the Central Province presented a Petition from inhabitants of certain Villages in Udunuwara in the Central Province, praying for an alteration of the line of the proposed Railway from Péradeniya to Náwalapitiya, so as to avoid injury to their properties.
5. OTTY AND SALE OF LANDS IN JAFFNA.—Mr. Coomara Swamy, pursuant to notice, asked why Government had as yet deferred to adopt any measures whereby the heavy expense and delay incident (under the existing system) to the Otty and Sale of Lands in the Jaffna Peninsula, could be obviated?

   The Queen's Advocate replied.
6. BRIDGE AT RATNAPURA.—Mr. Harrison, pursuant to notice, moved for the production of any Report sent in to Government on the condition of the large Bridge lately erected at Ratnapura; and, if no such report has been received by the Government, that a report be called for, and presented to the Council.

   Motion agreed to.
7. TOLLS BILL.—On the motion of the Queen's Advocate, the Bill was read a second time.
8. GAS METER BILL.—On the motion of the Queen's Advocate, the Bill was read a second time.
9. BILL AMENDING CUSTOMS' ORDINANCE, 1869.—The Queen's Advocate brought up the Report of the Sub-Committee on this Bill, which was read by the Clerk of the Council.
10. RAILWAY EXTENSION BILL.—On the motion of the Colonial Secretary, the Council resumed consideration of this Bill.

    Read Clause 1.—Carried.
    Read Clause 2.

On the motion of Mr. Harrison the following witnesses were called in, and examined*:—

Capt. A. B. Fyers, R.E., acting Director of Public Works and acting Director-General of the Ceylon Railway.
Mr. E. Robinson, Finance and Traffic Manager of the Ceylon Railway.

The Council adjourned to Thursday the 22nd instant.

ORDER OF THE DAY.—*Thursday, 22nd December,* 1870.

The Council to resume consideration of the following Bills:—

"An Ordinance for raising £150,000 on Debentures for the extension of the Railway from Péradeniya to Náwalapitiya.

"An Ordinance to apply a portion of Surplus Revenues to the extension of Railway Communication."

PROCEEDINGS.—*Thursday, 22nd December,* 1870.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.
2. Proceedings of the last Meeting read.
3. RAILWAY EXTENSION BILL.—On the motion of the Colonial Secretary, the Council resumed consideration of this Bill.

   On the motion of Mr. Harrison, Mr. E. Strong, Engineer of the Ceylon Railway, was called in and examined.†

The Council adjourned to Thursday, the 29th instant.

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* For Minutes of Evidence, *vide* pages 29—34.

† Ditto, *vide* pages 35—44.

ORDER OF THE DAY.—*Thursday, 29th December*, 1870.

The Council to go into Committee on the following Bills:—

"An Ordinance to amend the Ordinance No. 17 of 1869."
"An Ordinance to establish further Tolls."
"An Ordinance for regulating measures used in sales of Gas."

PROCEEDINGS.—*Thursday, 29th December*, 1870.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.
2. Proceedings of the last Meeting read.
3. ASSENT TO BILLS.—The Colonial Secretary announced to the Council, that His Excellency the Governor had given his assent to the following Ordinances:—
   "An Ordinance to prolong the duration of the Ordinance No. 12 of 1869."
   "An Ordinance to amend the Ordinance No. 3 of 1870."
   "An Ordinance for making provision for the Supplementary Contingent Charges for the year 1870.
4. PAPER.—The Colonial Secretary laid on the Table a Statement of Earthwork on the Dimbula and Dikoya roads, furnished by the Acting Director of Public Works.
5. BILL AMENDING CUSTOMS ORDINANCE, 1869.—On the motion of the Colonial Secretary, the Council went into Committee on this Bill. The Colonial Secretary having reported the Bill with amendments, the Report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown.
6. TOLLS BILL.—On the motion of the Colonial Secretary, the Council went into Committee on this Bill. The Colonial Secretary having reported the Bill without amendment, the report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown.
7. GAS METER BILL.—On the motion of the Colonial Secretary, the Council went into Committee on this Bill. The Colonial Secretary having reported the Bill with amendments, the Report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown.

The Council adjourned to Wednesday, the 4th January, 1871.

ORDER OF THE DAY.—*Wednesday, 4th January*, 1871.

The Queen's Advocate to move the third reading of the following Bills:

"An Ordinance to establish further Tolls."
"An Ordinance for regulating measures used in sales of Gas."

The Council to resume consideration of the following Bills:—

"An Ordinance for raising £150,000 on Debentures for the extension of the Railway from Péradeniya to Náwalapitiya."

"An Ordinance to apply a portion of Surplus Revenues to the extension of Railway Communication."

The Sub-Committee to bring up their Report, and the Council to go into Committee, on the Bill:—

"An Ordinance for making provision for the Contingent Services of the year 1871."

PROCEEDINGS.—*Wednesday, 4th January*, 1871.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.
2. Proceedings of the last meeting read.
3. REPORT OF LAW OFFICERS.—Read Letter from the Law Officers of the Crown, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of the following Ordinances in the terms proposed, viz.:
   "An Ordinance to amend the Ordinance No. 17 of 1869."
   "An Ordinance to establish further Tolls."
   "An Ordinance for regulating measures used in sales of Gas."
4. RAILWAY EXTENSION.—Mr. Wise presented a petition from the Coffee Planters of the District of Dimbula, Dick Oya, &c., stating their views with reference to the Railway extension upwards from Peradeniya, and praying for the immediate adoption of the scheme now before the Council.

   Petition received.

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LEGISLATIVE COUNCIL.

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5. CROWN LAND IN U'VA.—Mr. Wise presented a Petition from proprietors of Coffee Lands and others in U'va, praying that Government would forbid the sale of any more lands on the Namanakulle Mountain, or the felling of the forest thereon, as the Petitioners fear that the destruction of the forests will seriously affect the rainfall.

Petition received.

6. RAILWAY EXTENSION.—Mr. Harrison presented a Petition from the Chamber of Commerce expressing their views in favour of the narrow gauge system in Railway extensions, and praying that full consideration be given to the subject before any extension of the line beyond Gampola is sanctioned.

Mr. WISE handed in copy of a Protest signed by ten members of the Ceylon Chamber of Commerce, dissenting from the views expressed in the above Memorial, and advocating the Government scheme.

7. TOLLS BILL.—The Colonial Secretary, with permission, postponed the third reading of this Bill to Saturday the 7th instant.

8. GAS METER BILL.—The Colonial Secretary, with permission, postponed the third reading of this Bill to Saturday the 7th instant.

9. RAILWAY EXTENSION BILL.—On the motion of the Auditor-General the Council resumed consideration of this Bill. The Auditor-General having reported the Bill with amendments, the report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown.

10. SURPLUS REVENUES BILL.—On the motion of the Auditor-General the Council resumed consideration of this Bill. The Auditor-General having reported the Bill with amendments, the report was adopted.

11. SUPPLY BILL, 1871.—The Colonial Secretary brought up the Report of the Sub-Committee on this Bill, which was read by the Clerk of the Council.

The Council adjourned to Saturday the 7th instant.

ORDER OF THE DAY.—*Saturday, 7th January*, 1871.

The Queen's Advocate to move the third reading of the following Bills:—

"An Ordinance to amend the Ordinance No. 17 of 1869."

"An Ordinance to establish further Tolls."

"An Ordinance for regulating measures used in sales of Gas."

The Queen's Advocate to move the first reading of the Bill.

"An Ordinance to amend the Tolls' Ordinance No. 14 of 1867."

The Council to go into Committee on the Bill:

"An Ordinance for making provision for the Contingent Services of the year 1871."

PROCEEDINGS.—*Saturday, 7th January*, 1871.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

2. Proceedings of the last Meeting read.

3. PAPERS.—The Colonial Secretary laid on the Table the following Papers:—

Letter from the Director of Public Works, No. 3 of the 4th January, 1871, reporting on the condition of the Ratnapura Bridge.

Letter from the Engineer of the Ceylon Railway, No. 1 of the 3rd January, 1871, reporting on the Allagalla Viaduct.

Report of the Committee appointed by His Excellency the Governor to consider the subject of Travelling Allowances to Public Officers.

4. BILL AMENDING CUSTOMS' ORDINANCE, 1869.—On the motion of the Queen's Advocate, the Bill was read a third time and passed.

5. TOLLS BILL.—On the motion of the Queen's Advocate, the Bill was recommitted for further consideration; the Bill being reported with amendments, the Report was adopted, and on the motion of the Queen's Advocate, the Bill was read a third time and passed.

6. GAS METER BILL.—On the motion of the Queen's Advocate, the Bill was read a third time and passed.

7. BILL AMENDING TOLLS' ORDINANCE, 1867.—On the motion of the Queen's Advocate, the Bill entitled "An Ordinance to amend the Tolls' Ordinance No. 14 of 1867," was read a first time, and the second reading fixed for Wednesday the 11th instant.

8. **SUPPLY BILL, 1871.**—On the motion of the Colonial Secretary, the Council went into Committee on this Bill. The Colonial Secretary having reported the Bill with amendments, the report was adopted, and the third reading fixed for Wednesday the 11th instant.

9. **INSOLVENCY BILL.**—The Colonial Secretary brought up the Report of the Sub-Committee on this Bill, which was read by the Clerk of the Council On the motion of the Colonial Secretary, it was resolved that the Bi l be withdrawn from the present Session, and that the Sub-Committee be empowered to continue their labours after the close of the Session.

10. **PROPERTY AND TRUSTEES BILL.**—The Colonial Secretary, as Chairman, brought up the Report of the Sub-Committee on this Bill, which was read by the Clerk of the Council.

11. **GENERAL MORTGAGE BILL.**—The Colonial Secretary, as Chairman, brought up the Report of the Sub-Committee on this Bill, which was read by the Clerk of the Council.

The Council adjourned to Wednesday the 11th instant.

ORDER OF THE DAY.—*Wednesday, 11th January, 1871.*

NOTICES OF QUESTION.

Mr. COOMARA SWAMY.—To ask why better accommodation than that which exists at present should not be afforded to the Passengers by the Railway, at some of the intermediate Stations between Colombo and Kandy.

Mr. COOMARA SWAMY.—To ask, whether Government has any objection to lay on the Council Table any Despatches in their possession relating to the grant of public money for the maintenance of Christian worship and of the Ministers of Christian Religion in this Island.

NOTICE OF MOTION.

Mr. COOMARA SWAMY.—To move that this Council think it necessary that an enquiry should be instituted into the working of the present system of Native Headmen employed both in the Revenue and Judicial Departments of the Public Service, with the view to render them more efficient and useful; and also into the working of our Minor Criminal Courts, with the view to discourage the vexatious and false litigation now so prevalent in them.

The Colonial Secretary to move the third reading of the Bill:—

"An Ordinance for making provision for the Contingent Services of the year 1871."

The Auditor-General to move the third reading of the following Bills:—

"An Ordinance for raising £150,000 on Debentures for the extension of the Railway from Péradeniya to Náwalapitiya."

"An Ordinance to apply a portion of Surplus Revenues to the extension of Railway Communication."

The Queen's Advocate to move the second reading of the Bill:—

"An Ordinance to amend the Tolls' Ordinance No. 14 of 1867."

The Council to go into Committee on the following Bills:—

"An Ordinance to amend the Law of Property and to relieve Trustees."

"An Ordinance to amend in certain respects the Law of Mortgage and Hypothec."

PROCEEDINGS.—*Wednesday, 11th January, 1871.*

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

2. Proceedings of the last Meeting read.

3. REPORT OF LAW OFFICERS.—Read Letter from the Law Officers of the Crown, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of the Railway Extension Bill, in the terms proposed.

4. ASSENT TO BILLS.—The Colonial Secretary announced to the Council that His Excellency the Governor had given his assent to the following Ordinances:—

"An Ordinance to amend the Customs Ordinance, No. 17 of 1869, and to provide for the issue of Warehouse Warrants."

"An Ordinance to establish further Tolls."

"An Ordinance for regulating measures used in sales of Gas."

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5. ADDITIONAL ENTRANCE INTO THE FORT OF GALLE.—Mr. Wilson presented a Petition from certain inhabitants of Galle, praying that provision might be made in the estimates for 1871 for this work.
Petition received.

6. BILL AMENDING TOLLS' ORDINANCE, 1867.—Mr. Coomara Swamy presented a Petition from Traders and Cart owners in Colombo and other principal Towns in the Island, praying that the proposed Toll Ordinance, amending the one No. 14 of 1867, might be postponed until the next Session.
Petition received.

7. RAILWAY STATION ACCOMMODATION.—Mr. Coomara Swamy, pursuant to notice, asked why better accommodation than that which existed at present should not be afforded to the Passengers by the Railway, at some of the intermediate Stations between Colombo and Kandy.
The Colonial Secretary replied.

8. GRANTS OF PUBLIC MONEY FOR MAINTENANCE OF CHRISTIAN WORSHIP.—Mr. Coomara Swamy, pursuant to notice, asked whether Government had any objection to lay on the Council Table any Despatches in their possession relating to the grant of public money for the maintenance of Christian Worship and of the Minsters of Christian Religion in this Island.
The Colonial Secretary replied.

9. NATIVE HEADMEN AND LITIGATION.—Mr. Coomara Swamy, pursuant to notice, moved that this Council think it necessary that an enquiry should be instituted into the working of the present system of Native Headmen employed both in the Revenue and Judicial Departments of the Public Service, with the view to render them more efficient and useful; and also into the working of our Minor Criminal Courts, with the view to discourage the vexatious and false litigation now so prevalent in them.
Motion agreed to.

10. SUPPLY BILL, 1871.—On the motion of the Colonial Secretary, the Bill was re-committed for further consideration; and the Bill being reported with amendments, the Report was adopted, and the third reading fixed for Saturday, the 14th instant.

11. RAILWAY EXTENSION BILL.—On the motion of the Auditor-General, the Bill was read a third time and passed.

12. SURPLUS REVENUES BILL.—On the motion of the Auditor-General, the Bill was read a third time and passed.

13. BILL AMENDING TOLLS' ORDINANCE, 1867.—On the motion of the Queen's Advocate, the Bill was read a second time, and considered in Committee. The Queen's Advocate having reported the Bill with amendments, the Report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown.

14. PROPERTY AND TRUSTEES BILL.—On the motion of the Queen's Advocate, the Council went into Committee on this Bill. The Queen's Advocate having reported the Bill with amendments, the Report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown.

15. GENERAL MORTGAGE BILL.—On the motion of the Queen's Advocate, the Council went into Committee on this Bill. The Queen's Advocate having reported the Bill with amendments, the Report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown.

The Council adjourned to Saturday, the 14th January.

ORDER OF THE DAY.—*Saturday, 14th January*, 1871.

The Colonial Secretary to move the third reading of the Bill:—

"An Ordinance for making provision for the Contingent Services of the year 1871."

The Queen's Advocate to move the third reading of the following Bills:—

"An Ordinance to amend the Law of Property and to relieve Trustees."
"An Ordinance to amend in certain respects the Law of Mortgage and Hypothec."
"An Ordinance to amend the Tolls' Ordinance, No. 14 of 1867."

PROCEEDINGS.—*Saturday, 14th January*, 1871.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

2. Proceedings of the last meeting read.

3. REPORT OF LAW OFFICERS.—Read letter from the Law Officers of the Crown, stating that their was in their opinion no legal impediment to the execution by the Colonial Tribunals of the following Ordinances in the terms proposed.

"An Ordinance to amend the Tolls' Ordinance, No. 14 of 1867."

[Postal]

"An Ordinance to amend the Law of Property and to relieve Trustees."
"An Ordinance to amend in certain respects the Law of Mortgage and Hypothec."

4. CIVIL PROCEDURE BILL.—The Queen's Advocate moved that the Sub-Committee appointed to report on this Bill be empowered to hold their sittings after the close of the present Session of Council.

Motion agreed to.

5. SUPPLY BILL, 1871.—On the motion of the Colonial Secretary, the Bill was read a third time and passed.

6. PAPER.—The Colonial Secretary laid on the Table Estimate of the Revenue and Expenditure for 1871.

7. PROPERTY AND TRUSTEES' BILL.—On the motion of the Queen's Advocate, the Bill was read a third time and passed.

8. GENERAL MORTGAGE BILL.—On the motion of the Queen's Advocate, the Bill was read a third time and passed.

9. BILL AMENDING TOLLS ORDINANCE, 1867.—On the motion of the Queen's Advocate the Bill was re-committed for further consideration; and the Bill being reported with amendments, the Report was adopted, and on the motion of the Queen's Advocate, the Bill was read a third time and passed.

10. ASSENT TO BILLS.—The Colonial Secretary announced to the Council that His Excellency the Governor had given his assent to the following Ordinances:

"An Ordinance for raising £150,000 on Debentures for the extension of the Railway from Pérádeniya to Náwalapitiya.

"An Ordinance to apply a portion of Surplus Revenues to the extension of Railway Communication."

"An Ordinance for making provision for the Contingent Services of the year 1871."
"An Ordinance to amend the Law of Property and to relieve Trustees."
"An Ordinance to amend in certain respects the Law of Mortgage and Hypothec."
"An Ordinance to amend the Tolls' Ordinance, No. 14 of 1867."

11. CLOSING OF THE SESSION.—His Excellency the Governor closed the Session with the following address:

GENTLEMEN OF THE LEGISLATIVE COUNCIL,

THE business of the Session having now been brought to a close, I am enabled to release you for a time from further attendance in Council.

The several measures which I proposed to you have all been passed, with the exception of the Insolvency Bill, which has been deferred till next Session at the request of the Colombo Chamber of Commerce, who have asked for time to submit their views respecting it. The details of the Bill, however, have already been so fully discussed in Committee, and the main principles of it are so generally acknowledged to be sound, that the measure will doubtless, with perhaps a few minor alterations, become law early next Session.

The Money Bills have received your careful consideration, and I have to thank you for the judicious and liberal appropriations which you have made to meet the requirements of the public service during the year which has just commenced.

The accounts for the past year have not yet been closed, but it is believed that the revenue of 1870 will be found to exceed £1,090,000, whilst the expenditure, including unexpended balances carried forward, will be about £1,070,000. The available cash balances of the Colony will thus have been increased to over £100,000, of which you have set apart £50,000 by a Surplus Funds Ordinance for Railway extension.

The revenue of the current year—1871—has been estimated at £1,115,000, and the expenditure at £1,113,500. Deducting from the latter the usual £10,000 for anticipated savings, there remains a margin of estimated revenue over estimated expenditure of £11,500. In connection with the large estimated revenue of £1,115,000 I may point out, as an interesting fact, that only about £720,000 of that sum is raised by taxes, the balance being derived from land sales, rents of land and buildings, sales of timber and Government stores, Railway and Steamer earnings, and from other such like miscellaneous sources, which cannot be fairly considered taxation in any sense whatever. The estimated expenditure has been applied as follows:—

	£
Ordinary expenditure, including maintenance of Public Works	667,000
Military Contribution	160,000
Railway Working Expenses	86,500
Railway Sinking Fund Contribution	58,000
On account of the Census	7,000
Balance of cost of Steamer and maintenance	13,000
New Public Works	122,000
Total £	1,113,500

LEGISLATIVE COUNCIL.
Proceedings.

Thus it will be seen that the portion of the revenue raised by taxation is only sufficient to defray the ordinary expenditure of the Government, and about one-third of the Military contribution, leaving two-thirds of the cost of military protection, all new public works, and all exceptional items of expenditure whatsoever to be met from other sources. Reckoning the population of Ceylon at two and a half millions, the rate of contribution to the general revenue is about *5s. 9d.*, or less than three rupees, per head. In Great Britain and Ireland the rate is, I believe, £2. *7s. 9d.* In the different countries of Europe it varies from 10*s. 8d.* in Sweden and Norway, to £2. *2s. 0d.* in France. In the United States of America the rate is £3. *3s. 7d.*; and in British India it is *7s. 3d.* If we bear in mind, too, that the average daily rate of wages in Ceylon is *8d.*,—that the wants of the masses are few, compared with those of the labouring classes at home,—that their houses and clothing cost them but a trifle,—and that the soil is productive at a comparatively trifling cost,—I think it must be admitted that there are probably few communities in the world, with a regularly organized system of Government, in which the pressure of taxation on the masses is so light as it is in Ceylon.

In addition to the sums provided in the Surplus Funds and Supply Ordinances for new Public Works, a Debenture Loan of £150,000 has been sanctioned for Railway extension,—making a total sum of £324,000 appropriated during the present Session for new undertakings, designed mainly to facilitate and cheapen the means of communication, and to increase the local production of food.

The decision at which you have arrived to extend the Railway to Náwalapitiya, a distance of 17 miles, on the same gauge as the Main Line is, I think, a judicious one; and I am glad to perceive that it is endorsed by public opinion. When I met you at the beginning of the Session, the information on the subject was incomplete, and I had then been led to believe that the difference between the cost of a broad and a narrow gauge extension would probably prove so great as to render a break of gauge at Péradeniya imperative. Since then, however, detailed surveys and estimates have been furnished, and the arguments they support in favor of a retention of the Main Line gauge appear to me unanswerable. An extension to Náwalapitiya on the broad gauge will pay: the work can be commenced without delay,—all debateable questions as to the relative merits of rival narrow gauges being thus avoided: and if the professional estimates before us are correct, which I see no reason to doubt, it will actually be more economical on the whole to make a short extension like this on the same gauge as the Main Line than on a 3′ 6″ gauge. The inconveniences of a break at Péradeniya will thus be avoided, and the Colony will at the same time be left uncommitted as regards the most suitable gauge for possible future extensions.

The wise and liberal policy to which you have adhered for some years past as regards the promotion of reproductive works is now bearing fruit in the rapid and solid progress of the Colony. It is interesting on an occasion like the present to trace what has been done of late in this respect. I find that in the present and five previous Sessions you have voted for Public Works upwards of £1,800,000,—exclusive of the cost of the Railway to Kandy, and of contributions from private individuals, and from Road Ordinance labour. This amount has been appropriated approximately as follows:—

	£
Upkeep and Departmental Charges	850,000
New Cart roads	290,000
New Bridges	100,000
Irrigation works	74,000
Improvement of Inland Navigation	32,000
Railway Extension to Náwalapitiya	225,000
Prisons, Hospitals, and Miscellaneous Improvements	229,000
Total £	1,800,000

The effect of the above large outlay on roads, bridges, and Irrigation works, when complete, will be as follows. About 70,000 acres of permanently irrigated land will have been added to the rice cultivation of the Island. Seventeen large and dangerous rivers will have been spanned by iron girder bridges, at an average cost of £6,000 each. And about 240 miles of new Cart road will have been added to the communications of the Island, at a cost to general revenue of £290,000, and to the Planters of £55,000, being an average rate of nearly £1,450 per mile.

Much, too, is being done for the social, as well as for the material improvement of the people.

The Amended Kandyan Marriage Ordinance has been brought into operation from the first instant, and every effort has been made by the Government, during the interval which has elapsed since its confirmation by Her Majesty, to secure the promulgation of the new enactment in every native hamlet throughout the Kandyan Provinces, and to ensure that the provisions of it are thoroughly understood.

The Service Tenures' Commission is working satisfactorily. The registration of services in all the Nindagama villages, about 524 in number, were, with a few unimportant exceptions, finished before the close of last year. In addition to this, the services in about 150 Temple cases have been ascertained and recorded; and it is satisfactory to find, that against the Temple decisions there has not yet been a single appeal. It may therefore be hoped that the Temple enquiry will prove more easy of settlement than was at first thought probable.

In the Educational Department, the policy which I indicated in my address to the Council at the close of the last Session, has been steadily kept in view during the past year, with the following results.

In 1869 the number of Schools receiving Grants-in-aid amounted to 21, in which about 1,600 children were receiving instruction. By the operation of the new Grant scheme, there are now nearly 250 schools in receipt of aid from Government, the number of children instructed in them being about 10,000. Besides this, about 40 new Village Schools have been opened by the Department during the year, affording instruction to not less than 1,000 scholars. The significance of these figures will be better understood when it is stated, that in 1869 the total number of children receiving instruction in both Government and Grant Schools was 8,750, and that the number in these two classes of Schools is now not less than 18,000; in other words, the number of children whose instruction is either wholly or in part provided for out of the Education Vote has increased under the new system by more than 100 per cent. This result has been effected at an additional cost to the public of only about £3,500 a year.

On the whole, a survey of the position of the Colony at the close of the year 1870 presents abundant grounds for thankfulness. The Island generally continues healthy; the harvests have proved fairly productive; and the finances are in a thoroughly sound and satisfactory condition. Trade no doubt is dull, owing to the deplorable war in Europe which is now being carried to such harrowing extremities, but even in this respect the Colony has as yet suffered less than might have been expected from such a calamity, and all industrial occupations are being prosecuted with vigour and success. I fervently hope, that by the blessing of God the favorable local prospects with which we are entering on a new year may be realized, and that when we again meet together I may be enabled to congratulate you on the restoration of Peace.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE LEGISLATIVE COUNCIL

ON THE

RAILWAY EXTENSION BILL.

Wednesday, 21st December, 1870.

Captain A. B. Fyers, R.E., Acting Director of Public Works, and Acting Director-General of the Ceylon Railway, called in and examined.

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Proceedings.

Minutes of Evidence.

Capt. *A. B. Fyers*, R. E.

1. Mr. *Harrison.*] You are Acting Director of Public Works and Director-General of Ceylon Railway?—I am.

2. As such, you have had the direction of the surveys which have been made for constructing the line of Railway to Náwalapitiya?—I have not.

3. Are you not Director-General of the Ceylon Railway?—I am.

4. Have you not been engaged in the consideration of this extension officially?—I have not.

5. You have been for some years acting as Surveyor-General of Ceylon?—I have.

6. As such, you have had opportunities of studying the nature of the country between Péradeniya and Gampola, and Gampola and Náwalapitiya?—I have, to some extent.

7. Do you think a line between Péradeniya and Gampola would be more expensive than one between Gampola and Náwalapitiya?—I think one between Gampola and Náwalapitiya would be more expensive. You must remember I am speaking without book, figures, sections, or surveys.

8. I imagined, as Director-General of Railways, you had the control of this line. Do you know the line of the country which is to be traversed by the Railway?—I have been over it.

9. What should you say is the general character of the country along which the line is laid out; is the line laid down on a side or upon a level base in cross sections?—Generally on an even base, except for some distance before you get to Gampola; from Gampola to Náwalapitiya there are hills to be passed, as well as embankments to be made.

10. As an engineer, should you consider it desirable to lay out such a line of railway, which is considered advisable, on the higher ground, or to carry it through the lower ground, where you would probably have transverse sections?—I would have it on the level ground; but this would of course depend upon probable cost.

11. And if that lower ground was through wet paddy fields, do you still think it desirable to carry your line through those wet paddy fields, rather than along the adjoining solid high ground?—It would depend upon whether the line would be more expensive upon the high than upon the low ground. The contour of the land would also have to be taken into account.

12. Then you do not believe that the country between Péradeniya and Gampola, or Gampola and Náwalapitiya, is such as would be suitable for a narrow gauge?—I do not say so.

13. Do you think it is a country which would make the narrow gauge desirable?—There would be no difficulty in carrying out a narrow gauge. If the main line had been on the narrow gauge I should continue the line on the same gauge. As the main line is not on the narrow gauge, I would continue on the broad gauge.

14. What is your opinion as an Engineer?—Provided there were no other counterbalancing circumstances, there would be no difficulty in adopting the narrow gauge.

15. Do you think a narrow gauge would be sufficient to carry all the traffic that comes upon the main line at present?—Not probably without extra work

The *Governor.*] These are questions to be put to the Railway Manager.

Mr. *Harrison.*] I put them to Captain Fyers as Director-General of the Railway. As Director of Public Works, I will ask him if he can tell me the cost of roads in the Central Province?—I can.

16. What is the formation width of roads throughout the Central Province?—Generally from 14 to 16 feet for side-long roads.

17. A complete road. You know the Dimbula and Dik Oya roads, for instance?—I do.

18. What width is the roadway?—About 14 feet.

19. And the side-drains about 2 feet more?—Exactly so.

20. What is the average quantity of earthwork in cuttings and embankments on these roads?—I cannot exactly tell you, without reference.

21. Cannot returns of such particulars be laid before the Committee—I should wish it if there is no objection.

The *Governor.*] They can be produced any day you like, though the Director is not able to answer you the question now.

22. Mr. *Harrison.*—I should like to have a return shewing the average quantity of earthworks for cuttings and embankments throughout the Central Province—Of the whole of the roads in the Central Province? or of those in progress at present?

LEGISLATIVE COUNCIL.

Proceedings.

MINUTES OF EVIDENCE.

Mr. Harrison] Of, say the Dimbula and Dik Oya roads. The average quantity of work in the cuttings, and the slopes at which the banks are cut; the greatest height of the cutting to the average height. You may also give us the average slope of the ground on the higher side; the general line of the country on which these roads are made; the average sectional area of the cuttings, and the average sectional area of banks, when banks are needed Also, the average cost per mile of earthworks of these roads, and the quantity of cubic yards per mile of cutting which you have, and the cost of cutting per cubic yard of excavation, including rock. (See Appendix No. 1, page 17.)

Capt. *A. B Fyers*, R. E.

23. Mr. *Coomara Swamy.*]—Have you had any experience in Railway Works?—I have not.

24. Are there any men in your Department who have?—I do not know. Mr. McBride, I believe, was at one time connected with an Irish Railway.

25. Has Mr. Grinlinton?—I don't know. Mr. Grinlinton is in the Survey Department.

26. Can you tell me whether, if the estimate was made of the construction of the Railway on longitudinal sections only, and no cross sections taken, there would not be a difference?—There might be a difference.

27. What proportion do you think?—It depends on the nature of the country.

28. You know the nature of the country between Gampola and Náwalapitiya?—Yes; but I cannot say what would be the difference.

29. There is a saving in your report of roads mentioned of £2,120, which will result from this Railway being constructed Can you give the details of the saving?—That was prepared by the Provincial Assistant for the Central Province. It was a correct saving I consider.

30. The *Surveyor-General.*]—You are acquainted with the main line from here to Péradeniya, and know the Pass. Is there nothing in the nature of the Railway, going up the Incline, which prevents the adoption of very sharp curves?—Sharper curves might be made, but I consider that they would not be desirable.

31. Mr. *Harrison*]—You are not responsible for the statement in Sessional Papers II. of 1870, giving the estimated receipts and profits?—Not at all.

E. Robinson, Esq

E. ROBINSON, Esq., Traffic Manager, Ceylon Railway, called in and examined.

32. Mr *Harrison.*]—You are Traffic Manager of the Ceylon Railway? I am.

33. How long have you been so?—From May, 1867.

34. What is the present amount of goods traffic on the Railway?—For the present year, at date, it is estimated at 154,600 tons. That is the actual traffic to the 11th December, and estimated from the 12th to 31st December.

35. Then the traffic that has actually passed over the line during 1870 is not up to that which has been put down in the estimate in Sessional Paper No. II., namely, 161,000?—There is a deficiency of 6,400.

36 There has been a very rapid development of traffic on the Railway?—There has.

37 What do you estimate the annual increase to be?—In 1870 the increase will be 38,000 tons. over 1868

38. What was the quantity in 1869?—In 1868 it was 116,176, and in 1869, 134,369 tons.

39. So that there was an increase in that year of 20,000 tons?—Yes; nearly so.

40. An annual increase of 20,000 tons in fact?—Yes.

41. Do you believe any considerable increase in the goods traffic of the main line would necessitate the laying down of a second line of Railway?—I do not think that the traffic will ever increase to such an extent as to necessitate a doubling of the line.

42 Could you run double the traffic you have?—I doubt if we could.

43. You doubt that you could run over the single line 300,000 tons?—The chief difficulties would be the Incline, want of station accommodation, and so on.

44. I do not mean only working by day, and working only occasionally, but if you had a traffic of importance, which you wanted to carry, could you not run twice the present traffic with a single line of rails?—I could do it with a single line of rails.

45. Could you run three times the traffic?—I dare not venture to say so.

46. At present you are on the staff system, and you include two sections, I believe, in each staff. If you double the number of staff stations, you would at once double the carrying capacity of your line?—We could not possibly do that, for the simple reason, that from Kadugannáwa to Ambépussa all the stations are staff stations

47. You might not double them, but you could considerably increase them?—The telegraph system is undoubtedly the better with a large traffic.

48. With an improved station accommodation, and telegraph system instead of the staff system, could you not treble the carrying capacity of the present line?—I am not prepared to say so.

49. You could certainly double it?—I think so.

50. Are you aware that a traffic, very nearly equal to the traffic of the present main line, has been run over a line of two-foot gauge, not working at nights or on Sundays, and that no difficulty or delay arose during the year 1869?—I have no knowledge of it.

51. Would you believe it, if you had it on the word of the Engineer of the line?—Yes; but much would depend on the nature of the traffic.

52. Say there were 150,000 tons?—Tonnage does not always represent work. There might be bulky articles.

53. And if there were bulky articles?—They would require more vehicles.

54. The *Colonial Secretary.*] If, for instance, it was merely carrying slates, there would be no difficulty?—There would be no comparison then.

55. Mr *Harrison.*] Do you find any difficulty in transporting the present quantity of goods over the line?—No difficulty.

56. How many trains do you run for the traffic?—Four goods trains each way; that is, I should say, at the height of the season. There are three goods trains each way; one special goods train between Rambukan and Kandy; and the afternoon train is a mixed train.

57. How many trains could you run on the line in a day?—I suppose we could double the number.

58. Do you think you now run trains as heavy as practicable on the lower portion of the line; or is the weight of each train regulated entirely by your power on the Incline?—Between Colombo and Rambukan we are now running at the maximum load of the engines.

59. So that you would have to increase the number of your trains to increase your traffic. And you could without difficulty double the number of your trains?—Yes.

60. In the case of the recent landslips, how many trains did you run per day?—We ran then on the Sunday, in addition to the ordinary weekday trains.

61. You do not work at night?—We do not.

62. If you were to run twice as many trains as you do, and to run on Sundays as well, could you not accommodate four times the traffic you do? I am not prepared to say so. I could not even say that I could run treble the number of trains; I could certainly double them. Night trains upon the Incline are not very safe.

63. You say the Incline is not safe?—No, I do not say so; but I do not think it judicious to work over the Incline at night, as it is liable to be obstructed.

64. But if there were a pilot engine, would it not be safe?—I should not like to be on the pilot engine.

65. What do you say to watchmen on the line?—We had watchmen on the line, but we found that they used to go to sleep with their heads on the rails, and they got killed.

66. Without killing watchmen, and without night trains, you could carry on the present line double the existing traffic?—Yes, and without working on Sundays.

67. You are aware, from the complaints which have been made, that delay has arisen in the transport of goods from Colombo to Kandy, and that there has been a block at Kandy in consequence. How comes that?—I am not aware that there has been a block at Kandy since November, 1867, except when the line has been obstructed.

68. I have seen accumulations of coffee which I was anxious to have removed to Colombo, and I have been told they could not work it off, and that they were waiting for returned empties?—Very possibly; the traffic fluctuates, and possibly being very heavy for a few days, I could not send up the empties, but I don't think this state of things lasts for more than two days. It is not possible to re-arrange your train service to meet a case which may arise in 24 hours.

69. Certainly the line is worked as admirably as it can be worked, but would not the delay be obviated by having a greater number of waggons on the line?—No, I don't think it would.

70. The *Colonial Secretary.*] Has the delay in sending goods any connection with the gauge of the line?—None whatever.

71. Mr. *Harrison.*] No, but it has to do with the scarcity of waggons for the purpose. When you have a rush of coffee, a scarcity of waggons arises, because they do not get back from Colombo in time to be loaded?—I do not admit that is the case.

72. The *Auditor-General.*] Is not the block caused by a deficiency of trains as well as deficiency of stock?—Certainly; one day we may be working up empties; the next day we may have such a rush of rice that the trains are loaded. You cannot alter train arrangements every 24 hours. Traffic, it must be remembered, fluctuates very much, and rolling stock lies idle sometimes, whilst at other times it is heavily worked.

73. Mr. *Harrison.*] You have then a sufficiency, not too much or too little, in the shape of waggons, and if you increase your traffic from 154,000 to 200,000 tons in the same proportion as it is increased, you would require an addition to your rolling stock, as far as the waggons are concerned?—Certainly; the stock would have to be increased.

74. Of the 154,000 tons which run over the main line, how many use the Pérádeniya Station?—48,000 tons.

75. I suppose it is hardly in your Department to say where that comes from; but in the explanatory notes which you have seen, the proportion from the Gampola road is put down at 42,000 tons?—It is.

76. What is the character of that traffic?—The up traffic consists chiefly of rice, manure, and general goods, and the down traffic of coffee.

77. Nothing else down?—A few empty rice bags.

78. You have no mineral traffic?—None.

79. You have no traffic which is carried in bulk in waggons?—No bulk traffic.

80. It is all, in fact, a traffic carried in bags?—There are general goods besides in cases, &c.

81. And the whole of the traffic is of a kind which is easily moved?—Yes

82. Goods are moved to and from trucks by the Railway servants at Colombo, Kandy, and Pérádeniya?—Yes.

83. What is the cost per ton of moving from carts to trucks, and trucks to carts?—At Pérádeniya we pay 2*d.* a ton for loading in the waggons.

84. What distance have those goods to be moved?—From the warehouse to the waggon.

85. And you find no difficulty in having them so removed?—None.

86. Do you believe there would be greater difficulty in moving such traffic from one Railway waggon to another Railway waggon than from a cart to a truck and *vice versâ*?—I believe not. With proper arrangements it would be quite as easy.

87. Is 2*d.* a ton a fair average rate?—I think so.

88. What is it at Colombo?—I have not got it with me, but I think it is something over 1*d.*

89. The reason it costs you 2*d.* a ton at Péradeniya is because it is a new place. There was no population there, and you had to draw the coolies engaged in that particular work from Colombo?—The cost of labour is undoubtedly greater at Péradeniya than it is at Colombo.

90. The principal reason is that there is no accommodation for the coolies at Péradeniya. If you were to erect lines there as you do for your employers elsewhere, you could get the work done for the same as in Colombo?—The cost of labor will always be greater at Péradeniya than at Colombo, as the cost of living is greater. Again, at Péradeniya the shunting is all done by coolies, whereas in Colombo it is done by engine power.

91. Do you move your goods for 2*d.* a ton now at Péradeniya?—I do.

92. The *Governor.*] You state that is the charge of cooly hire. Are there not any exceptional charges—overseeing or that sort. Supposing you had to transfer the goods from one waggon to another, would there be no further charge than 2*d.* per ton?—There would be the supervision.

93. Mr. *Harrison.*] What would be the additional charges? At present you have to watch the goods that are moved from the platform or the warehouse to the waggon. Would it be more costly to supervise the moving of the goods from the broad gauge waggon to the narrow gauge waggon?—I think very likely it would be; you would probably require two men where we now require one.

94. What class of men would you be likely to employ for such a work?—The present man is paid £7 10*s* a month.

95. The *Colonial Secretary.*] Would it cost as much, or more, to transfer from waggon to waggon, as to carry from warehouse to waggon?—I believe about the same for cooly labor.

96. If you had a break of gauge, would the expense of transfer from waggon to waggon be additional to the transfer from waggon to cart?—It would.

97. If you break gauge there would be two transfers—one at Náwalapitiya, from waggon to cart, and one at Péradeniya from waggon to waggon?—Of course there would.

98. The break of gauge would therefore cause an extra charge of 2*d.* per ton on every ton of goods travelling?—Yes, in addition to superintendence.

99. The *Auditor-General.*] Is there any loss on transhipment?—Yes, frequently; owing to the bad quality of the bags.

100. Mr. *Harrison.*] On whom does that loss fall?—On the owner.

101. And therefore, if an owner uses bad bags, the loss falls on himself?—Certainly.

102. The *Colonial Secretary.*] Is there any delay in the transhipment of goods at Péradeniya?—Not that I am aware of.

103. What time would it take to empty a train loaded with coffee into an empty train at Péradeniya?—Supposing a train were to arrive in the morning, the goods would be transhipped on the same day.

104. How many hours' delay could there be?—The train would not get to its destination in time to unload that night.

105. It would be equivalent to a delay of one day?—Yes, of one day.

106. Mr. *Harrison.*] At present you empty your store once every twenty-four hours?—Yes, we do.

107. And you would in the same day empty your train and warehouse in 24 hours?—Yes, we would.

108. You would have no difficulty with proper arrangements in transferring from one waggon to another, any more than from the warehouse to the waggon?—No.

109. The *Colonial Secretary.*] Whatever delay there would be would be extra?—It would.

110. The break of gauge would involve a delay of 24 hours in the transmission of traffic?—Yes.

111. There would be two transfers instead of one?—There would.

112. Each transfer takes 24 hours as a rule?—It does.

113. Mr. *Harrison.*] What are the rates per ton per mile?—For goods, which are in the second class, "up," 4*d.* per ton per mile. Coffee, "down," which is special, is about 3½*d.* 3·40*d.* is the rate, I believe, from Péradeniya.

114. What are your working expenses per ton per mile?—I have never worked it out.

115. Does not that come within your Department?—We have only got it approximately. Where you have a mixed staff it is impossible to obtain the information.

116. Do not you calculate how much it costs you to do the work?—No; we find out the cost per train mile, not per ton per mile.

117. Is it not possible for you to give this Committee a return shewing the cost per ton per mile, how much it costs you to do that for which you get 3½*d.* or 4*d.*?—I cannot furnish explanation which would be satisfactory to myself, and I am sure it would not be satisfactory to the Committee. It could only be approximated.

118. Is there not in any returns which have been laid on the table of Council, figures shewing 40 per cent. on the working expenses. Therefore, if you charge 4*d.* per ton per mile, and you know your working expenses are 40 per cent., you can give the information I want, can you not?—No, I cannot give the cost of working the goods as distinct from the passenger traffic.

Mr. *Harrison.*] I think it is a point in which Government might fairly call for returns.

The *Auditor General.*] I have had a good deal of experience in Railway management; any return of this kind would be entirely fictitious; the Traffic Manager would have to adjust his figures.

119. The *Governor.*] Is it usual to prepare such statements in connection with Railways?—I never knew of one.

120. Mr. *Harrison.*] When you make a return shewing the train miles run, do you actually calculate the miles run by trains for goods and passengers?—The train mileage includes the mileage of trains proper, empty engines, and of shunting, but it does not include the mileage of pilot engines.

121. You found the train mileage rather heavy, so you put in a number of additional miles?—No; the Engineer claimed empty engine and shunting mileage, and the Government allowed it.

122. So then it is not easy to get at the truth of a return like this?—There are hardly two lines which follow the same system in getting at their train mileage.

123. Could you not shew the cost of goods and passenger traffic?—No.

124. Could you not give us the cost of running a ton of goods per mile?—I cannot.

125. Can anybody in your department?—No one can.

126. If it costs you 2*d.* per ton per mile to run 160,000 tons of goods over a line 75 miles in length, would it cost you more or less to run 42,000 over a line 67 miles in length. Can you run small traffic at the same rate per ton per mile as large traffic?—Probably not.

127. What do you think it would be per ton per mile?—I cannot go into the question, as I have never worked it out.

128. I believe your return would give it very nearly. During the year you have carried 160,000 tons, and you know your expenses are so much. It would be very easy to deduct a fair share for passenger traffic, and then to calculate the cost per ton per mile?—In fact, cook it.

129. I fancy Railway accounts are very often cooked?—I am not accustomed to it myself.

130. Perhaps you can give us the number of tons you have carried to the 20th December, and the approximate cost of carrying those goods?—That is almost the same question in another shape. I cannot divide the cost of the passenger and the goods traffic

131. Other Traffic Managers seem to do so?—It is cooked then. It can only be approximate.

132. Can you tell me whether it would cost more in your opinion per ton per mile to work a traffic of 42,000 tons, or to work a traffic of 160,000 on the same style of Railway?—Yes; the cost per ton per mile would probably be greater with 42,000 tons than with 160,000 tons.

133. The *Governor.*] If there were an incline on the one, and no incline on the other, that would alter the calculation?—Materially; again, the slower the speed the lower the working expense.

134. The general principle in such cases being, in fact, that all the conditions are the same?—Yes.

135. Mr. *Harrison.*] You cannot give me the cost of working per ton per mile on the main line. Nor the probable cost per ton per mile on the proposed extension?—I cannot give you the cost per ton per mile either on the main line or the proposed branch.

136. The *Governor.*] You can give us the estimate of working expenses in another form. Do you believe the estimate of 40 per cent. on the gross receipts to be a fair one?—It is rather under-estimated.

137. What do you think would be a fair estimate?—The working expenses of the proposed extension proper would be nearly £7,000 a year.

Mr. *Harrison.*] These are £5,389.

138. The *Governor.*] Can you give any reason why the present estimate is higher than the original one?—The expenses are generally higher than I expected. In the first instance, I took 40 per cent., that being the per centage of working expenses on the main line in 1869; but this was too low, and the detailed estimate I have now made gives the working expenses at £6,945. (See Appendix No. II., page 18).

139. With regard to your estimate of the additional traffic thrown on the main line, do you still adhere to your estimate of 40 per cent working expenses?—No; that was more erroneous than the estimate of 40 per cent. on the proposed extension. In going through the statistics of the main line, I found that development of traffic only costs for working 10 per cent. Instead therefore of £7,032, as in the first estimate, the working expenses should be £1,759.

140. Mr. *Harrison.*] So that the net profit that would come upon the main line, owing to the extension, instead of amounting to £10,557, would amount, you believe, to what sum?—£15,830.

141. And that profit to the main line would be brought from the traffic which would come in at Péradeniya?—Yes.

142. And the profit would still remain, whether the traffic came by cart or other means?—Certainly; provided it did come.

143. So that whether the traffic came by narrow gauge or broad gauge, you would have still £15,830 instead of £10,557?—Yes.

144. You have to add £5,000 to the original estimate and deduct £1,600?—Yes.

145. What are the rates per mile for such goods as coffee and rice on the Indian Railways,—the East Indian, the Madras, and the great Indian Peninsula?—I don't know what class coffee is in, but rice is special.

146. Take the nearest equivalent to coffee, say tea?—I should say 3*d.* per ton without terminal charges; and sometimes these charges amount to 8*s.* or 9*s.* per ton

147. You have stated your rates are 4*d.* and 3½*d.* per ton per mile. What are the Indian rates?—They are not based on the same principle as on this line, where there are few special rates and no terminal charges.

148. Could you not prepare a return to lay before this Committee?—I have the rates, but not the terminal charges, except in the case of one Railway, where they were given me by the Traffic Manager.

149. The *Auditor-General.*] Would not a terminal charge of 7*s.* per ton on a line of 84 miles be equivalent to an extra charge of 1*d.* per ton per mile?—Exactly.

150. The *Governor.*] Have you heard of a rate of 9*d.* per ton per mile on any Railway?—Never.

151. In no part of the world? No.

152. Mr. *Harrison.*] Do you know the rates on the Nicaragua line?—I don't.

153. That is a line which has a monopoly, and the rates are a good deal more than those His Excellency has referred to. The traffic is exceptional, and the rates are exceptional. You cannot tell me of course the working expenses of the line, but you can perhaps say what proportion the working expenses in the Indian Railway bears to the gross receipts?—On one, the East Indian, 41·72; on the Bombay and Baroda line, 75·84. (See Appendix No. III., page 18).

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MINUTES OF EVIDENCE

E. Robinson, Esq

154. The *Colonial Secretary.*] Will not the working expenses on the Ceylon Railway be the best data on which to form an estimate of the working expenses of an extension ?—They are the only guide; the working expenses on the Indian Railways or the Nicaragua line would form no guide at all.

155. Mr. *Coomara Swamy.*] What are the net profits we are to expect on this proposed extension on the broad gauge ?—£24,399.

156. Is the interest on £20,000, the difference on cost between the broad and narrow gauge taken into consideration ?

The *Governor.*] There is no interest calculated at all.

157. Mr. *Harrison.*] Are the expenses of working a broad gauge line more than those of working a narrow gauge line ?—I don't think they would be much more; but I have had no experience, and know nothing about the working of narrow gauge lines.

158. Mr *Coomara Swamy.*] Deducting interest (10 per cent.) on the £150,000 raised by debentures from the profit, what would it come to ?—£9,399.

159. If you further deduct 5 per cent. on £100,000, what would the profits be ?—£4,399.

160. Then deduct 5 per cent. on £20,000, and how much have you left?—£3,399.

161. Do you think all the traffic you can expect for the extension could be carried on the narrow gauge ?—I think the traffic could be accommodated on a 3′ 6″ gauge.

162. The *Colonial Secretary.*] The working expenses on a 3′ 6″ and 5′ 6″ gauge will be about the same. You have no reason to think otherwise ?—No.

163. Can you specify what difference of working expenses there would be in the line to Náwalapiṭiya, if there were a break of gauge at Péráḍeniya ?—I cannot say in detail; there would be a considerable difference. In the one case, you have a shunting and transhipment station, and in the other merely a passing station.

164. The *Governor.*] Would not carrying on the line on the same gauge reduce your present expenses at Péráḍeniya, for your traffic would be on the same line. It would be nearly a junction station and a station for Deltoṭa ?—We should get rid of part of the staff which would have to be transferred to Gampola. There would be the saving in the Station Master's salary, for instance

165. Mr. *Harrison.*] Do not you require a Station Master in any case ? You have to receive the Deltoṭa coffee ?—Yes, about 3,000 tons.

166. Well; 3,000 tons of coffee will require a man to take care of it. Do you think you could save out of that ?—Yes, about £40 a year. Then the saving in warehousing would be £90, and in transhipping £482 a year.

167. Yes; but we have those items before.

168 You have no further saving then beyond £40? —No.

169. The *Colonial Secretary.*] Would you not require a large staff at Péráḍeniya with a branch line and a break of gauge ?—Yes; there would be extra cooly labour and warehouseman. It would be a more important Station, and probably the salary of the Station Master would have to be increased.

170 The cost of the Station would tend to increase, if there were a break of gauge, and to decrease, if there were none ? Yes.

171. Mr. *Coomara Swamy.*] Are not estimates for stations, rolling stock, and contingencies, likely to be exceeded ?—That is Mr. Strong's estimate, and I should prefer not to give an opinion on it.

172. The *Auditor-General.*] Is your passenger stock sufficient for your present traffic ?—It is much in excess of the ordinary requirements.

173. If there was any extension on the broad gauge, would your present passenger stock be available ?—Yes, available, and probably sufficient.

174. If you had a narrow gauge extension, would it be available ?—Certainly not, you would have to buy new.

175. You said that your present waggon stock was not more than sufficient for present requirements ?—I could get more work out of it by increasing the number of trains.

176. Could you carry an increased traffic of 20,000 or 30,000 tons on the main line with your present rolling stock, by running additional trains?—Yes

177. You have had an increase of 20,000 tons per year. Do you expect, that without any extension you could expect that to increase ?—No, not reasonably. In my opinion, we have nearly reached the maximum of traffic.

178. Mr. *Harrison.*] Will you give the Committee your reasons for that opinion ?—I do not think we can reasonably expect to go on increasing at the present rate, year after year. For the last six months the increase has been chiefly in one direction, that of Péráḍeniya, and has been mostly in the down traffic.

179. Do you think, if the railway be extended to Náwalapiṭiya, we can reasonably expect the traffic to go on increasing?—Yes, from the new land to be brought into bearing beyond Náwalapiṭiya, and from traffic now going by other routes, which will be attracted to the line.

180. Do you believe that men who bought land before this Railway extension was talked of would give up the idea of opening that land if the Railway extension were not decided upon ?—No.

181. The *Governor.*] Do you not propose to carry manures at a much lower rate than carts carry them now?—Much lower.

182. The tendency of manure is to increase the production of land?—It is.

183. Mr. *Harrison.*] Do you think it is desirable to get manures to the bottom of a hill at Náwalapiṭiya, when there were twelve miles up and nine down in order to get into Dimbula; or do you think it is desirable to have them carried to the heart of the district ?—That is rather a general question

184. The *Colonial Secretary.*] A new line has much more development than an old one ?—Certainly, and to shew that we cannot go on always increasing and developing at the same rate, as in the past, I may mention that the down traffic this year from Kandy has only increased 2,000 tons.

185. Mr. *Harrison.*] What increase has there been in the manure traffic of the Kandy Station ?—I have not taken out the manure traffic. (See Appendix No. IV., page 18).

Thursday, December 22nd, 1870.

E. STRONG, Esq., Railway Engineer, called in and examined.

186. Mr. *Harrison.*] Are you Chief Resident Engineer of the Ceylon Railway?—I am.

187. And in that capacity have you been employed in laying out the proposed line of extension from Pérádeniya to Náwalapitiya?—Yes.

188. From whom did you receive your instructions? From the Director-General of the Railway?—I received an official communication from the Director-General.

189. May I ask what were the instructions? The instructions were to make a survey, with the view of getting a favourable line for a 3′ 6″ Railway from Pérádeniya to Náwalapitiya.

190. Did you receive any other instructions but these?—None at that time.

191. Did you lay out an entirely new line between Pérádeniya and Gampola, or did you take one previously surveyed?—I adopted a new line up the 5¾ mile from Pérádeniya.

192. Then you adopted a new route for 5¾ miles?—There was first of all the river route, and the one running by the road side through the paddy fields. That was the only alternative there was.

193. The *Governor.*]. Did you keep to the old trace instead of the new?—No, the river route was really the old trace. I changed from that route to the one running at the side of the paddy fields.

194. *Mr. Harrison.*] Was there more than one line laid out?—No.

195. On what have been made the estimates which have been brought forward by Government before the present one?—There was only one. The river route was the only route of which a definite survey was made; the others were only partially surveyed.

196. I find in Papers No. 1 of 1870, that Mr. Molesworth submitted the estimate for a line which amounted to £232,900, in August, 1866. Do you know anything about that?—Yes; I have seen the route. It is the river route. I had nothing to do with the estimate.

197. Subsequently, Mr. Faviell tendered to construct a line for £153,830. Do you know if that tender was to construct the line proposed by Mr. Molesworth, or to construct some other line?—It did not go so far into Gampola. That was on a second estimate by Mr. Molesworth. He had gone into the subject a second time.

198. Subsequently to Mr. Molesworth's estimate, and Mr. Faviell's tender, Mr. MacBean made a tender for £147,096. What was that for?—That Railway stopped short of the first. The first went into Gampola. As far as I remember, Mr. Molesworth's first estimate took the line down to the Gampola Bridge, or nearly so; in the second case he stopped on the Pérádeniya side of the mosque.

The *Governor.*] There was no tender from any one on Mr Molesworth's first estimate, because that was rejected by the Executive as totally inadmissable. Mr. Molesworth was then asked if he could, by reducing the level, or taking another line, make a cheaper estimate. He examined the country, but found he could not get another line, but reduced his flood levels, and sent in another estimate for £139,000. Then tenders were called for; but no tenders were called for on the original estimate.

199. Mr. *Harrison.*] First of all there was Mr. Molesworth's rejected estimate of £232,900; then we have noticed in these Papers a tender of Mr. Faviell to construct a line to Gampola or thereabout, for £153,830; next, a tender from Mr. MacBean to construct a line for £147,096; next, Mr. Molesworth's estimate, whether made before or afterwards we cannot say, for £139,750; then comes an estimate from Major Skinner for £112,501. You knew all these were made when you made your present estimate for 5′ 6″ gauge line of £100,289?—Yes; I knew they were all made: mine is for £30,000 less than the original estimate.

200. How much is your estimate for a narrow gauge line to Gampola?

The *Governor.*] There is no estimate for a narrow gauge line to Gampola: there is to Náwalapitiya.

Mr. *Streng.*] The estimate has not been divided, except in miles. There is the estimate for a 3′ 6″ line to Náwalapitiya, and it could easily be taken from that; but I received no instructions to do so.

201. The *Colonial Secretary.*] You have separated the estimate mile for mile?—Yes, I have.

202. Mr. *Harrison.*] The estimate for the actual running road of the seventh mile is £43,195 6*s.* 2*d.* How then did you effect your reduction on the line between Pérádeniya and Gampola; for your estimate is less than all the others by a considerable sum. Was it effected by diminishing the quantities of work to be done, or by diminishing the price at which the work was to be done?—Diminishing the quantities.

203. When were the surveys commenced by you?—In July last, as far as I remember.

204. And in the course of your surveys did you survey one line only, or did you survey alternative lines?—The river route was already surveyed.

205. Then you abandoned it, and took to the road route. Did you run a line through and work your estimate on that, or did you make alternative lines?—Only the one line.

206. In continuing your line of survey from Gampola, did you survey alternative lines, or only the one line?—Alternative lines in several places; in some cases three or four alternative routes.

207. For short distances?—For two or three, and three or four miles.

208. And you chose out of this that which seemed the most judicious?—Yes, the cheapest.

209. Surveys were commenced in July last. Did you commence both on the Gampola and Náwalapitiya section at the same time?—The whole of the work was between Gampola and Náwalapitiya. Between Pérádeniya and Gampola it was decided almost before we commenced the work. The work had been done previously. The road gave you the line of the country.

210. Your time was principally employed between Gampola and Náwalapiṭiya. When did you send in your estimates?—I do not remember the date exactly, but about six weeks ago.

211. You were personally engaged in taking the surveys, and studied the country between Pérádeniya and Gampola, and Gampola and Náwalapiṭiya?—Yes.

212. Which is the easier on which to lay out a line of Railway?—That from Gampola to Pérádeniya.

213. Why?—It is easier country.

214. In what respect?—You have a road and level paddy fields to run through, and the Railway is almost part of the road, and the work through the paddy fields is very light until you get to 5¾ mile, and then it becomes heavy.

215. What constitutes the difficulty between Gampola and Náwalapiṭiya?—It is a very broken up country. Up to three miles beyond Gampola it is pretty easy, but at Ulupana the work was very difficult, and we run along side-lying ground throughout. Between Gampola and Náwalapiṭiya it is not side-lying ground as a rule, but there is side-lying ground at certain points.

216. Running up from Gampola, don't you keep on the sloping ground for a considerable distance?—As far as Alupani tunnel from the place I have referred to, but only for half a mile.

217. When you get to Náwalapiṭiya tunnel have you not got sloping ground to Náwalapiṭiya?—We turn to the right and get round so as to get through the paddy fields and get to Pasbáge. Then we have side lying ground.

218. And on to Náwalapiṭiya?—It is not side-lying ground to Náwalapiṭiya.

219 Then you consider the country between Gampola and Náwalapiṭiya much more difficult than that between Pérádeniya and Gampola, because it is so much broken up, and you do not run your line along side-lying ground?—Not on side-lying ground as a rule.

220. Why did you not keep on the sloping ground above the paddy fields, on the right of the main road from Gampola to Náwalapiṭiya?—We found it better not to do so. We found it better to keep on ground that is more level. I believe it was better.

221. And therefore you have a considerable larger proportion of banking than of cutting?—There is more banking than cutting. We tried to reduce work as much as possible, and kept down the cutting, making that as light as possible.

222. If you did not keep your line at the slope of the hill, you were obliged to run on low ground where banks were necessary?—No; we have no very heavy or high banks, except in some particular spots, where it is impossible to avoid them.

223. Would it not have been better to cling to the side of the hill than to go to low ground?—We get to the side of the hill when necessary, but when it is not necessary we remain in the paddy fields. There are different levels in these paddy fields, and we go on the higher grounds.

224. In the paddy fields?—Yes, you cannot tell until you see the spot. Sometimes we are in the paddy fields, sometimes on higher ground.

225. The *Governor.*] When you started to lay out the line, had you not some maximum gradient and curve given you?—Yes, 1 in 50 gradient, and a 5 chain curve.

226. Mr. *Harrison.*] Do not you think, that by more careful examination between Gampola and Náwalapiṭiya you could improve the line you have already laid out?—I do not think there would be any great improvement. You can't alter the character of the country, and you are bound by the hill on one side and the Mahavelliganga on the other. We tried the river route, and found we could not use it. In our present line in many places the earthworks are heavy, but the cuttings are much reduced. I do not think the cuttings are too light. We have a certain elevation to get over, and we get as high as we can, and lighten the work as much as possible.

227. Do you mean to say that you have not enough stuff in your cuttings to make your embankments?—The cuttings and embankments do not always go together.

228. In all cases where you have embankments, you would require to have stiff cuttings, or to carry the stuff a considerable distance to make your banks?—Yes.

229. Don't you think, that that being the case, it would be judicious to cling to the sides of the hills, so that you would have a large quantity of cuttings and a small quantity of banks, and in that way you would have kept out of low-lying, soft ground, and would have less stuff to remove. For a bank you have to carry and to deposit: for a cutting you have to throw to spoil?—It is a proof of lightening work when the cuttings are less. If our cuttings were more than our banks, we should have gone into expensive work injudiciously. There is no spoil. The Kadugannáwa Incline is the best laid out portion of the main-line. There are 330,000 cubic yards of embankments and 220,000 cubic yards of cuttings; the proportion of banks to cuttings is three to two. It is the same in this case.

230. As you touch upon the subject of the Incline, perhaps you will tell us whether, having to carry out that line, you would have gone to the Incline at all?—I don't know at all. I am simply speaking of it as it is.

231. It is a very bad job, and it is as well done as it could be?—I don't think it could be better laid out.

232. Don't you think the line could have been better laid out by running around to Mátalé than by going up the Incline?—I never went into the question.

233. Mr. *Wilson.*] There is no difficulty in smaller engines than those we have in going up a steep incline?—They take less up.

234. Is it not found in Australia, with lighter engines there is a great deal of stopping and delay in taking up a few trucks?—They take up about one-half on a 3′ 6″ to what they do on a 5′ 6″ line.

235. Mr. *Harrison.*] In looking at these longitudinal sections, the proportion of banks to cuttings seems to be very large?—They are nearly all embankments; for the first five miles there are no cuttings whatever, except at the corners of the roads in some places where the corners have to be cut away.

236. And that is the most desirable way of laying this line out?—It is.

237. That is the case for the first four miles and a half, but when you come to the fifth mile you have some very heavy cuttings and embankments?—Yes, at 5¾ miles.

238. Was not that to be avoided?—Not possibly; we tried to avoid it in every way.

239. Have you got cross sections of the ground at that point?—No.

240. In attempting to improve this line, did you not work out cross sections?—No.

241. Have you got any cross sections of the line at all?—No; they are in hand, and are not yet completed.

242. How did you manage to take out these quantities without cross sections?—They are taken out on the centre line.

243. So that the quantities, whether on side-lying ground or on the ground which was level, there being no cross sections, would be the same?—There have been allowances made where it was side-lying ground.

244. Then the quantities which are given, and the estimates which are framed, are upon longitudinal sections, without any transverse sections?—Yes.

245. Mr. *Coomara Swamy.*] When will they be completed?—In a month's time.

246. Not sooner than that?—I do not think so. For all practical purposes these quantities are correct. The Contractor's Manager was quite prepared to tender on these quantities.

247. Mr. *Harrison.*] He might be prepared to take it, because he might feel sure that they would be much in his favour?—If the Contractor would take it on these quantities he should certainly, so far as I could let him, have it. It would be a very good tender.

248. Yes, so far as longitudinal sections go; but it does not give you actual quantities?—Mr. Barnett of Madras looked at it, and said he was satisfied with it.

249. Mr. *Harrison.*] He knew it was in his favour, for it presented the worst possible phase of the case, and that, if anything, it would be in his favor, supposing it were side-lying ground. I think from what you say, that I may take it, wherever there was side-lying ground it would be so much in his favor?—No, not very much. It is very solid ground, and would run at a surface half to one, and you could take your quantities exactly.

250. It would be more judicious to take a contract on longitudinal than cross sections?—It depends upon the amount tendered.

251. Do you agree or disagree with the statement, that if the stuff stand at a very steep slope, the advantage to the Contractor will be greater, taking the quantities on the longitudinal sections than if the slopes were not very steep?—I mean to say, that the centre line section is more correct where the ground is stiff and stands nearest a vertical face. It is more correct in a case of this kind, and less affected.

252. What surface have you taken for these quantities?—Half to one.

253. The *Governor.*] When former tenders were made, were they on longitudinal or transverse sections?—The river route was tendered for on cross sections, but that was entirely a different style of country.

254. There was no tender for the river route, was there?—There was Mr. Faviell's tender.

255. Mr. *Harrison.*] And cross sections were made for the river route?—They were; but the river route was side-lying ground mostly, and the road route is level.

256. You have stated that the quantities are taken at half to one, but in many cases they will stand perpendicular. That being so, the contractor will take the earthwork perpendicular; it will stand at that slope, and he will get the benefit between the perpendicular and the original cutting at half to one?—No.

257. Why not?—In any case he will have to take it at one to one, one and a half to one. He will lose on one, and gain on the other; so half to one is a fair average.

258. Are there many slopes where one to one will be necessary?—Not very many.

259. Do you believe there are many where the stuff will stand perpendicular?—Yes, cabook stands best when perpendicular.

260. On the main line of railway the slopes stand very steep indeed?—Yes, they are steep, and they are therefore less affected by the weather.

261. With regard to these longitudinal sections, there are between the fifth and sixth mile very heavy cuttings and very heavy banks—there is indeed one very heavy bank. Do you not believe that that bank might be avoided?—No; we have tried to avoid it and we cannot do it. It cannot be diminished.

262. Can you not, by introducing a sharper curve at that point?—No, it is a strange thing; you get into deeper ground. You at once run off the ridge and get into deeper ground.

263. From the sectional plan, not having any transverse sections before me, I can hardly form a correct idea, but it would seem, from the plan and the section, that your line for three quarters of a mile is almost straight; at any rate for half a mile there is no bend, and for another quarter there is hardly any, and yet you think there must be a very deep cutting at 5½ mile, and a very deep bank at 5¾ mile. Could you not, by running round and by introducing two sharp curves, have gone round that very high bank, and in the same way have gone round that deep hill?—No; we looked at that carefully, and we decided it would be better to keep to the straight road. The bank would have been considerably deeper, if we had curved, for then we should have got into the deep paddy fields.

264. Going a little further, between 6 and 6¼ miles' distance, you have another very large cutting. Could not that have been avoided?—No.

265. Does the road go over such high ground as that?—Yes; as we have cut down our embankments we have of course our cuttings in proportion; and if our embankments had been higher, the cuttings would have been less.

266. Is the level of the viaduct over the Galagedara Oya the same as the level of the road bridge over the same river?—I should say lower. In reducing the height of the embankment we have made the cutting deeper.

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267. But there are no transverse sections shewing that by going to the right or left that could be reduced considerably?—You see it passes over paddy fields, and by turning to the right or left you at once get into lower ground.

268. Then when we get on to the longitudinal sections between Gampola and Náwalapitiya, for the first two miles we have light works comparatively, but after the first three miles we get into very bad cuttings indeed?—Yes, at Ulupani.

269. Do you not think some of these works might have been avoided by clinging to the side of the hill, rather than keeping to the lower level?—We have not kept to the lower level. We have had to make a certain point to get to Ulupani, and we rose 1 in 50. We were previously 1 in 40. We had three traces just there.

270. And you do not think that by taking a sharper curve than your maximum curve of ten chains or a sharper gradient than your maximum gradient of 1 in 50, you could have diminished your work?—No, certainly not; we should have introduced sharper curves, but without any advantage, and would have spoilt the line.

271. How could you have spoilt the line?—Sharp curves always spoil a line. It is a strange thing that all the Central Province is laid out by nature in ten chain curves. It is indeed a most extraordinary thing, but it is a natural feature of the country. A ten chain curve is easier than a five, for you run in too quickly with the latter.

272. Mr. *Coomara Swamy.*] Would sharp curves spoil a narrow gauge line?—Yes, any line. A straight line always works well.

273. Mr *Harrison.*] Is this tunnel at twelve miles unavoidable?—Yes, we tried to get round it, but we could not.

2' 4. Referring to the plan, I see you run away from the river there, the Ulupani river. Was it not possible to get round that high ground and get to the bank of the river?—No. we could not; we tried it over and over again. We spent more time there than we did at any part of the line,—that is the most difficult part we had to get over.

275. Do you there rise to your highest point. I see you ascend to 1,900 to 2,012?—No, the fourteenth mile is the highest.

276. You have a great deal of heavy work there?—Yes.

277. You laid out the line in order to have banks which were in the proportion of three to two as they were most economical. At the thirteenth mile you seem to have gone very heavily into cutting?—That could not be avoided, we tried it, but found it very difficult ground to get over.

278 As soon as you get to Pasbáge, going on to Náwalapitiya, you have more very heavy work—3,449, 5,624 and 47,957 for instance. Could none of those be avoided?—We tried to avoid them, but we could not. We got so far and could get no further, and in the end we had to stick to this trace.

279. Three miles of the worst work?—Very heavy work.

280. Worse than any of the rest?—Very heavy work.

281. In one bank you have 19,548 yards, in another 24,958, in another 5,482, in another 5,431, in another 23,984, in another 5,628, in another 29,144, in another 4,349, besides a tunnel of 10,922, and of 47,957. Is not that very heavy work?—It is very heavy work, but it is unavoidable.

282. If you carry the line to Náwalapitiya, you must have that work?—Yes, you cannot deviate very much. You have the Mahavelliganga on one side, and the range of mountains on the other. There is no great scope there.

283. And you cannot manage to wind round the hill-side, so as to avoid heavy cuttings and embankments?—No, we endeavoured to do it, but we found we could not. We got to places where we could not get any further, and we had to come back. We got to places where there would have to be enormous embankments. The sharper curves we attempted brought us in too quickly.

284. The country seems to have been made for ten chain curves. Nothing sharper could have improved the line?—No.

285. Your instructions were to proceed to make a survey on the 3' 6" gauge from Péradeniya to Náwalapitiya. Were you consulted as to the desirability of having a narrow gauge?—No. The 3' 6" gauge was given to me. My opinion was asked, and I said it should not be less. That was narrow enough for the narrow gauge.

286. Why?—I considered it was.

287. What were your reasons?—With a narrow gauge you have small locomotives, and you cramp your engines very much, so that you have a number of small engines doing little work.

288. You do not believe it possible to have an engine on a gauge of line less than 3' 6" which would be capable of doing good work?—Not profitable work, the fuel is not all that can be desired.

289. The *Governor.*] Why?—The coal deteriorates. The coal has nothing like the heating power it has at home. It loses in the long passage and the climate here, and has 30 per cent. less heating power.

290. Mr. *Harrison.*] Coal deteriorates and wood is such inferior fuel that you cannot get power out of your engine?—Wood is very good fuel, but it requires a very large fire box.

291. You don't think the line could have been worked on a 3 feet gauge?—It could have been worked, but a 3' 6" line would have been better.

292. Do you believe that the fuel deteriorates more than it does in India?—I should say the deterioration would be the same.

293. The Commissioners appointed to consider the question of gauge for India have decided in favour of a 2' 9" gauge?—Well, I should say they were wrong.

294. Mr. *Wilson.*] Have you any idea what style of country that is for?—I have not; but I should think it is much easier than the Central Province.

295. Mr. *Coomara Swamy.*] But they are going to the hills—Darjeeling and Simla—with this gauge?—I should say it was too small.

296. Mr. *Harrison.*] Then you give it as your positive opinion, as a locomotive engineer, that an engine on a less than 3 ft. 6 in. gauge could not be judiciously worked here?—I don't think it could.

297. In making your calculation for 3 ft 6 in. gauge here, what formation width did you adopt?—16 ft.

298. Don't you think that is unnecessarily large?—I don't think you could have it less.

299. What is the width of formation on the main line?—20 ft. in some places, in others more or less.

300. In a good many places is it 18?—In cuttings it may be.

301. Is it in some places 17?—I should say it is not; in rock cuttings it may be 18; but that is as low as you can go.

302. And you can only reduce on that width 2 ft. for a 3′ 6″ line?—I don't think you could do anything more. You must remember the carriages overhang, and there must be room for the men to work. There would be no room, if the formation width were narrower, to remove or handle the rails or sleepers.

303. Then on your estimates for a 3 ft. 6 in. gauge, your formation width throughout is 16 ft.?—Yes.

304. You have introduced curves sharper than ten chains and you have no gradients steeper than 1 in 80? And you don't believe a line of narrower gauge than 3′ 6″ could be judiciously worked in this country?—I think 3′ 6″ would be more profitable than 3′; it would give better results. The deepest gradient is 1 in 80, and the sharpest curve ten chains.

305. Is there any other reason, speaking of the profitableness of the line, than the necessity of a large fire box?—The cost of fuel and the drivers pay are the two dearest items in the way. A more powerful engine, though it burns more fuel, can pull a heavier load, and you have fewer drivers. If you have light engines you have more trains and need more drivers.

306. When making your calculations, did you consider that the traffic you will have to work over the greater portion of line, that is to say ten miles out of the seventeen, is estimated, including development, at 28,800?—Did you consider that, in arriving at the conclusion?—No; I cannot say I considered that item more than any other. I considered the whole question.

307. Don't you think that is a point of great importance in considering such a question?—If you expect a traffic of 200,000 tons, it would be necessary to arrange for heavy trains.

308. But when you know previously your traffic will not exceed 29,000 tons, don't you think you ought to take it into consideration when you are making your estimate of the relative advantages of broad and narrow gauge?—All these things have certainly to be remembered, and they have all been fully considered.

309. Did you think it would be quite out of the question to lay out a line, which could be judiciously worked between Péradeniya and Gampola with a gauge of two feet, and a formation width of 9′ 6″?—No, I don't think it would be well. The bullocks would upset the trains very likely.

310. You have fencing to keep out the bullocks?—The fencing is of no use, it rather serves to keep the bullocks in.

311. What sort of permanent way did you provide for?—50 lbs. rail.

312. What sleepers?—7 feet by 8 inches, by 4 inches.

313. And ballast?—Four feet less than the present line. That is 12 feet, and this one will be 8 ft.

314. And in your estimate of the cost of the broad gauge extension, what did you take your rails at?—72 lbs.

315. And your sleepers?—9 feet 6 by 10 inches, by 5 inches.

316. And your ballast?—12 feet by 18 in. deep.

317. Now you have heard of Capt. Tyler, Government Inspector of Railways, and you have heard he has taken an interest in narrow gauge railways in England?—Yes.

318. He has made a Report on the subject of narrow gauge lines, and he says in his Report with reference to the Festiniog line,—

"The employment of locomotive engines on this little railway, and its opening for passenger traffic, were not only highly interesting experiments, but very likely to be followed by important results. Although there were still, doubtless, numerous districts where railways on a gauge of 4 feet 8½ inches might be profitably made, yet there were also many others in which lines of cheaper construction were required. With a narrow gauge, lighter rails and sleepers, less ballast and cheaper works generally might be adopted: sharper curves might be laid down, very heavy gradients, particularly in mountainous regions, might be more easily avoided, and lighter engines, with lighter vehicles, might be made to do all the work where high speed was not demanded, and where the traffic was not heavy."

Do you believe that these views are at all applicable to this case?—No, I do not think they are.

319. Again he says:—

"The adoption of the locomotive power upon this little line (that line being 2 ft. 9 in. gauge) is very important, and has, evidently been a very successful experiment. The cheapness with which such a line can be constructed, the quantity of work that can be economically performed upon it, and the safety with which the trains run over it, render it an example which will undoubtedly be followed sooner or later in India, and in the Colonies, where it is desirable to form cheap lines for small traffic, or as a commencement for developing the resources of a new country."

You do not think there is anything in the nature of the country between Péradeniya and Náwalapitiya, or in the kind of traffic to be worked, to make a narrow gauge railway such as is here described by Capt. Tyler desirable?—No; I think the advantages are as nothing compared with the disadvantages arising from a break of gauge.

320. What are the disadvantages arising from a break of gauge?—They are very serious, and exist in every shape or form. You cannot work your waggons on the two lines; you have no intercommunication, and you have to have duplicates of every kind of stock. You have to transfer goods from one waggon to another at the junction. At home we had a break of gauge and waggon, and we destroyed every narrow gauge waggon rather than retain them.

321. Supposing you do not work your narrow gauge waggon on the broad gauge line, do you see any other disadvantage beyond the transfer of goods from the broad to narrow gauge vehicles?—You have to increase your number of vehicles to do the work where there is a break of gauge. There will be more shunting necessary at Péradeniya.

322. You say in your Report:—

"On the merits of the two gauges, the circumstances of the case admit of much to be said in favour of each. Were the proposed line of Railway from Péradeniya to Náwalapitiya unconnected with any existing Railway, I would recommend the 3′ 6″ gauge, which would fully meet the requirements of the traffic; be cheaper to construct; not more expensive to work; and would be of the narrow gauge, which further extension into the Coffee Districts, if carried out, will necessitate; and would therefore be of uniform gauge with Railway extension in that direction."

Is there nothing in that paragraph you would wish to withdraw?—No.

323. You say there is much to be said in favor of both gauges, but you say nothing in favor of the narrow—all in favor of the broad?—Oh yes; I say it is cheaper to construct.

324. There is nothing else in favor of it: everything else is against it. Do you really think no greater saving than what you say in your estimate can be effected?—No; we endeavoured to make the first estimate as low as we could, to make it a cheaper line.

325. You do not think that if you stuck to the 3′ 6″ line, you could effect a saving of more than £24,000?—I don't think the estimate could be lowered.

326. You do not think a narrower gauge would be advantageously worked in this country?—No.

327. Mr. *Wilson.*] You would require workshops for the narrow guage?—Yes; there would be two distinct departments—the broad gauge and the narrow gauge.. Everything would have to be in duplicate.

328. Mr. *Harrison.*] Have you heard of this Festiniog Railway in any way failing to do that which it was intended to do—carry a certain quantity of traffic?—It is a very good line for a mineral line. We had them in Scotland. One I had to do with ran for one or two miles' distance, and worked satisfactorily.

329. This is 17 miles?—I have never seen it.

330. It has been running for many years without any difficulty or delay?—For minerals it is a very nice little gauge. It is very compact. For coffee or bulky articles it would be very unsuited.

331. Do you not think you could carry a traffic of 28,000 tons on a line which is used to carry 130,000 tons?—You could do it, but it would be more costly with the narrow gauge. You would carry so many more waggons in proportion to carry coffee.

332. Mr. *Wilson*] Is there not on the Festiniog line chiefly an incline for the loaded waggons down hill?—It is all down hill, I believe.

333. Mr. *Harrison.*] Are you not aware that there is a goods traffic upward?—Only of provisions, I believe.

334. The *Governor.*] We have Mr. Molesworth's report on the subject.

335. Mr. *Harrison.*] The actual traffic was 118,000 tons down, and 18,000 up. Is it not a disadvantage to have all your traffic one way?—It is best to have your traffic down hill.

336. You have then to draw up empty trucks, which pay you nothing?—If you had 100 tons it would be better to have to draw it down hill than up, but it would be best to have 75 one way and 25 the other.

337. If you had 100 tons down hill, would it not be better to carry 100 up hill, rather than draw your trucks up empty?—It would be better if you had paying freights.

338 On such a line would it be better to have half the traffic down and half up, or would you rather have all the traffic down?—It is best to have two-thirds down and one-third up.

339. And do you think there would be much less wear and tear on a line of this kind to your engines, rolling stock, and way, than to those you have now?—It is rather the other way. I think the upkeep would be more. Lighter machinery is always more expensive to keep up than heavy.

340. Would you believe the Engineer of this (Festiniog) line, when he says in a statement drawn up and published, that the maintenance is less than the average maintenance on broad gauge lines?—It depends upon the tonnage; besides, I don't know who the Engineer is.

341. I have the evidence here, but not in a form in which I can put it in?—There is no doubt it is true. It depends very much how the comparisons are made.

342. Mr. Sproule, the Engineer of the line, recommends that the narrow gauge should be 2′ 6″; rails 50 lbs. to the yard, a formation width of 9′ 6″. Do you think these are practicable?—I think they are suitable for mineral traffic.

343. Do you consider them unsuitable for rice and coffee?—Yes; you require a bulky waggon that will carry a good deal.

344. And this same gentleman says he estimates there is a considerable saving in the construction of such lines; but you have only reduced your cost £1,700 a mile. He says next, that there is a considerable saving in dead weight, viz., "The large proportion of paying load to non-paying or tare weight of the train." Do you believe that is possible?—It depends entirely upon the class of traffic.

345. With a class of traffic like coffee, which weighs 40 lbs. or thereabouts to the bushel, would it be impracticable to work a narrow gauge?—You could do anything; but the simple question is, "Is it disadvantageous?"

346. The *Colonial Secretary.*] How do you know on this line the proportion of dead to paying weight?—Only that I know mineral traffic is carried on small uncovered waggons, and that there is very little dead weight. When you use covered carriages, you increase your dead weight. The quantity of dead weight depends upon the class of goods carried.

347. Mr. *Harrison.*] You effect a great reduction in your wear and tear, as well as the advantage gained in rolling stock. Do you not do so by reducing your dead weight?—It depends so entirely on the nature of the traffic.

348. As regards the character of this line, you say in your Report that the minimum radius of curves is ten chains. It is not severe for a narrow gauge line, but it is for a broad gauge line?—It is.

349. Could you not reduce the severity by having a narrower gauge on your ten chain curve?—We could not possibly mix the gauges.

350. No, but instead of laying down a broad gauge line with these ten chain curves, if you laid a narrow gauge line your curves would be so much the easier?—They certainly would not be so severe on a 3′ 6″ line.

351. What is severity?—The grinding of the flanges and the rails,—severe wear in fact. You would reduce that on a narrow gauge line. That would be a point you would gain on, and you would lose on others.

352. What others?—You would have a break of gauge, and you would have two drivers doing the work one would do on a broad gauge line.

353. You have no very steep gradient to go up, have you?—We have 1 in 50, and that is severe. The one on the main line is 1 in 45. It would require two light engines to do the work of one of our broad gauge engines.

354. You believe therefore, that single engines could not be constructed to do the work of this 17 miles' extension, if the line were narrow gauge?—It could be done; but it would require more trains to do the work with the narrow gauge than with the broad gauge.

355. How many tons is the maximum you work over your main line in a day?—From 800 to 900 tons up and down.

356. That is your net, and not your gross weight?—Exactly so. It is about 500 tons down and 300 up.

357. Instead of running a traffic every day of 800 tons for 75 miles, you will have on the extension 28,000 tons all the year round, and a line of 17 miles' length to run it over?—Yes, but you must recollect it will not come all the year round, it will come all at once. It comes in rushes now, and we shall then have far more in one or two months of the year than in others.

358. Your maximum daily traffic is one two-hundredth part of your gross traffic during the whole season?—Yes.

359. Therefore you would have one two-hundredth part of your gross traffic on 28,000 tons on the Náwalapitiya extension in a day?—Yes.

360. That would be about 140 tons?—Yes.

361. That is up and down?—Well, the coffee would all come down: and rice and manure go up.

362. Rice and manure would go up all the year round, and coffee come down at a particular season. Is not this a very light traffic indeed?—It would not be heavy.

363. Mr. *Wilson.*] How much would a train going up 1 in 50 take?—On the broad gauge about 40 tons nett.

364. On the narrow?—The half of that—20.

365. On a 2′ 6″ gauge?—It is hard to say: very little I should think.

366. Mr. *Harrison.*] That is your opinion?—Yes; judging from what we know our engines are doing on the Incline.

367. You can only form an idea of what the maximum load on an incline, 1 in 50, on the narrow gauge would be?—Yes.

368. The *Auditor-General.*] Do you refer to the maximum load with mineral traffic?—With mineral traffic you could take more, for your waggons are lighter. We are now speaking of rice and coffee.

369. The *Colonial Secretary.*] I believe you admit 3′ 6″ would be sufficient for the traffic?—Yes.

370. But the traffic would require more trains, more engines, and more drivers?—Yes.

371. It would be less economical in working therefore?—Yes.

372. With a mineral traffic a narrow gauge would quite answer the purpose?—Yes; for mineral traffic you do not require covered waggons, and you can load more on your waggons as you have consequently less dead weight. Again, uncovered waggons are more easily loaded.

373. If you have a light commodity, your dead weight is large in proportion?—Yes, the dead weight would be greater on a narrow gauge line.

374. Would the sharpness of curves be counterbalanced by a low rate of speed.—Yes; the slower the speed, the less the wear is.

375. On a broad gauge line, where a low rate of speed is all that is desired, severity of curves would not be so objectionable?—You cannot run fast where the curve is severe. Lowering the speed is the only way of reducing the wear and tear.

376. The *Governor.*] Have you made any attempt to reduce the severity of these curves; and are there not inventions regarding engines which reduce that severity?—Yes, they have been carried out here in every shape and form. Engines at home would not pass round our curves.

377. Mr. *Harrison.*] But even with improved engines you have a great wear and tear on the Incline?—We have got a greater wear and tear between Pérádeniya and Kadugannáwa than on the Incline. There is a great wear and tear simply from the speed the trains run at.

378. The *Governor.*] What speed do you go at?—We have reduced it to 15 miles an hour from 20; and the drivers say they run at 15, but it is nearer 20.

379. Mr. *Harrison.*] On the Incline do you not think there is a great wear and tear on both the tyres of engines and rolling stock, and rails, consequent upon working upon ten-chain curves?—Yes; with ten-chain curves there must be a great wear and tear.

380. Do you believe that wear and tear would considerably diminish, if you had a narrow gauge, instead of broad gauge, with suitable rolling stock?—You would save on wear and tear.

381. Both on rails and rolling stock?—Yes.

382. Mr. *Wilson.*] Would not a milder curve be really as advantageous on a narrow as on a broad gauge?—Certainly.

383. The *Colonial Secretary.*] Are our carriages with the broad gauge of the right size and capacity?—Not quite; with coffee they are quite full, with rice they are not.

384. Is there not a loss of dead weight by the carriages being of too large capacity?—Our covered waggons are 5 tons 6 cwts., and they carry 6 tons. I believe they should not be heavier than 5 tons; and we are making them lighter as we build them. A 5-ton waggon will carry 6 tons.

385. Mr. *Wilson.*] Six tons in weight of coffee?—Yes.

386. Mr. *Harrison.*] Is there a load of 6 tons on waggons that weigh 5½?—Yes; and we lighten them now. As we lighten the waggon we can carry more. Every hundredweight we take off the waggon can be added to the weight we carry of goods. The springs and axles are the same.

387. Returning to the estimates, I find here and there put down quantities of rock cuttings. How did you arrive at them? Were they merely surmises?—Merely a surmise

388. Could you give us the cost of working per ton per mile on the main line?—You can work out the figures easily. If you divide the tonnage by the money you spend, you have it.

389. Will you give us a return of the rate you receive per ton per mile on the main line, and the sum which it costs you per ton per mile?—That can easily be got from the Administration Reports. There would be no trouble in dividing the tonnage by the amount of money.

390. The *Colonial Secretary.*] How would you divide the share of cost of passenger and goods traffic?—You would have to take it at so much; you cannot possibly get it exactly.

391. Mr. *Harrison.*] You could get it reasonably correct?—You would have to take what you receive, and strike off a per centage for passengers After all, it would be only a made-up statement—it would be figures.

392. Do you give the figures upon which are based the statements here as regards the cost of working traffic?—No; I only give the expenses of my own Department—maintenance, locomotive, and carriage repairs.

393. What proportion of the expenses does that amount to?—I give them at 2*s.* locomotive working, 1*s.* 6*d.* maintenance, and 6*d.* waggon and carriage repairs; 4*s.* in all, per train mile.

394. And do you know what the total estimate amounts to per train mile?—The other charges, traffic and general charges, are 1*s.* 4*d.* per train mile; 5*s.* 4*d.* altogether.

395. Mr. *Coomara Swamy.*] Have you had much experience in the construction of Railways?—Yes.

396 Were you employed in England?—Yes; I have been 19 years employed on Railways at home.

397. Anywhere else, either in America or Europe?—No, only in England and Scotland. I was 16 years in Scotland, and 3 years in England.

398. Constructing there?—Yes, both working and constructing.

399. Who were employed with you in the surveys for the extension?—Mr. MacBean was told off specially for the work. His whole time was devoted to making surveys

400. Does he know more of the estimates than you do?—No.

401. Or of the nature of the country?—No.

402. Can you tell me whether there is any gentleman in Ceylon connected with the Public Works Department or the Survey Department, or amongst private gentlemen, who has been concerned in the construction of Railways?—Mr. Byrne, I think.

403. Have you any other names?—I don't know of any.

404. Has Mr. Noad?—I don't know. Mr. Byrne I know has been employed on Railways.

405. The *Auditor-General.*] How long ago?—It was on a Railway in Ireland, but I could not say how long it is ago.

406. Mr. *Coomara Swamy.*] Mr. Byrne was employed by the Ceylon Government in 1866 in making estimates connected with a part of this proposed Railway?—Yes

407. What are the tests by which you call a line a branch line or a continuance of the existing line?—Do you not say in your Report that if the line were a branch line you would recommend it to be on the narrow gauge, but because it is in connection with the main line, you recommend it to be on the broad gauge?—No; my Report does not say so

408. Is it simply the connection, which exists in the case of this branch and the main line, that induces you to say this particular extension should be on the broad gauge?—It is simply this: if the extension had not to be connected with a gauge of 5′ 6″, it would not matter what the gauge would be.

409. Is that the only reason why a line should be considered a part of the existing line? Have you not got to consider also whether the line will carry the same goods as the existing line before you can call an extension a part of the existing line?—There is not the least doubt that a branch is supposed to carry the same goods as the main line.

410. If the line did not carry the same goods, would you consider it part of the existing line?—A branch line is a branch line, and you can call it nothing else.

411. Mr. *Harrison.*] This is a branch line?—It is.

412. The *Colonial Secretary.*] The difference in a branch line and the extension of the main line is in this—the one goes on in the same direction from the terminus, the other branches from an intermediate station?—Just the same as the branch of a tree; whichever is constructed first is considered the trunk.

413. Because you make it on the broad gauge?—No; gauge has nothing to do with it.

414. The *Governor.*] If this line eventually carries more traffic than that between Pérádeniya and Kandy, which would you consider the trunk line?—Whichever is constructed first is considered the trunk.

415. It is a mere question of calling?—It is merely names.

416. Mr. *Coomara Swamy.*] If this extension carried the same quantity of goods as the main line, would not you call it a continuance of the existing line?—They both mean the same. If you call them extension or branch, they mean the same.

417 Mr. *Harrison.*] Some call them feeders or suckers?—Exactly so.

418. Mr. *Coomara Swamy.*] I find from your report estimates were made both for the broad and narrow gauge. Do both the lines run through precisely the same country?—Yes, precisely the same country.

419. Supposing the narrow gauge line were not to run through precisely the same country, what would the cost be?—This line was first laid out for a narrow gauge line, and you have already got the cheapest route. It was most carefully selected, because it was the most economical.

420. The *Auditor-General.*] If you had carried the line in any other direction, it would have been dearer?—Yes, so far as we at present know.

421. Mr. *Coomara Swamy.*] Would a line of 2′ 9″ take all the traffic?—I am opposed to a 2′ 9″ gauge. It would take all the traffic, but it would require a greater number of trains and vehicles.

422. Would the cost of transport be greater?—I think it would.

423. You say in your report that the working expenses of a narrow gauge would not be less than those of a broad gauge?—I am of that opinion.

424. Do you think they would be greater?—With a 3′ 6″ gauge, they would be the same: with a 2′ 9″, greater.

425. Then those for 3′ 6″ and 5′ 6″ would be equal?—Yes, per ton, not per train mile.

426. The cost of working per train mile would be less with a narrow gauge?—Yes; but you would carry only half as much as with a broad gauge. What will cost 2*d.* per ton on the narrow gauge will cost 2*d.* on the broad, but the trains in the latter will cost more than those in the former. They will however carry more goods, so that the cost will be the same. I do not modify the opinions I have expressed in my report.

427. Can you tell me if your estimate for a broad gauge line at £250,000 is likely to be exceeded so far as your knowledge of Railway construction goes?—I don't know; I hope not. I believe it is reliable work, and the estimate was made as carefully as an estimate could be made. It may be a little too high or a little too low. I am responsible for it.

428. In the B. estimate you have got several items, viz., land, stations, rolling stock, machinery, workshops, and contingencies. Do you not know that in the existing line these heads were almost doubled?—I know the stations have been more.

429. And the land?—I don't know.

430. Rolling stock?—No, the rolling stock has been pretty fair.

431. Machinery and workshops?—Probably they were.

432. Administration?—Administration is a per centage on the whole work.

433. In the case of the existing line, was not the estimate doubled?—I cannot say.

434. Not under contingencies?—No, I think there was a saving under contingencies.

435. Then under the head of stations the estimates were exceeded?—They were.

436. The *Auditor-General.*] Is it likely they will be exceeded on this branch line?—No; we have found out the evils of the system, and we will avoid them.

437. Does not the experience you have had on the main line enable you to make a fair estimate?—Yes, there was a mistake in connection with the stations on the main line which we shall carefully avoid.

438. Mr. *Coomara Swamy.*] Is it not possible, by carrying your line through different country, to construct the gauge of 3′ 6″ for less than you name in your estimate?—I don't think so.

439. In making the estimates for a narrow guage you admit they were founded on longitudinal sections?—Yes.

440. Have you left any margin to make up any difference which may be found when the cross sections are taken?—On what side?

441. Either?—We have endeavoured to make them so that even if we lose on the one, we gain on the other. For all practical purposes they are correct. We cannot say anything more; there is no margin.

442. In your estimate for the extension from Péradeniya to Gampola you make no provision for telegraphs?—One is not required. There is a telegraph at present running along the road; an additional line can easily be put up.

443. Mr. Molesworth estimates the cost at £400?—I do not think we should need it at all; it is not very necessary. At any rate it could be met by contingencies, which amount to £16,000. That is supposed to cover anything of this kind.

444. With Mr. Molesworth, contingencies come to £12,500; yours is only £6,500. How does that arise?—The amount is less as the river route is a more risky line. Contingencies are a mere per centage on the whole: 5, 6, or 7 per cent.

445. The *Colonial Secretary.*] In fact, the amount of contingencies depends upon the amount of the estimate?—It does.

446. Mr. *Coomara Swamy.*] Is it possible to carry this line to Péradeniya or to Gampola in a cheap way, and retaining all the savings you have made, by taking a route which will not destroy the houses and paddy fields mentioned in the petition presented yesterday?—We have avoided that as much as possible, and kept to the road as much as we could. We don't destroy many houses, they are a mere nothing. It was suggested yesterday that by taking the line on the other side of the houses, on the hill side, we might possibly be able to save both the fields and the houses; but if we go to the other side we get into the irrigation ella, and then there would be a tremendous uproar. It is as cheap to pass the other side of the houses, but I thought it better to avoid the ella, and not to touch it.

447. Mr. *Harrison.*] Are you aware what the stations cost?—They cost a great deal. I don't know that they cost £180,000.

448. What was the estimate?—I think there was no estimate.

449. The *Governor.*] There was a clause in the compact: the stations, I believe, cost £160,000.

450. Mr. *Coomara Swamy.*] Have you had any experience in constructing or working any narrow gauge lines?—No; I have had experience in connection with a 4′ 8½″ gauge; but I don't call that a narrow gauge.

451. Mr. *Harrison.*] Have you ever made the working of these lines a subject of study when in England?—No, except in the case of small lines in connection with collieries.

452. What was the gauge?—Two feet. They used to run locomotives with little hutches, and we found them work very well indeed.

453. The *Auditor-General.*] Did you not make due allowance in taking out the quantities from the longitudinal sections, so as to provide against contingencies?—Yes; whenever there was side-lying ground, in taking out the quantities, a fair allowance was made.

454. The *Governor.*] Practically, is not an estimate based on longitudinal sections as correct as one on transverse sections?—The difference would be a per centage of 2 or 3 only.

455. The *Colonial Secretary.*] Cross sections are being taken, and will be ready before contracts are asked for?—Yes.

456. The *Governor.*] They will be before the Contractors before they are asked to come forward?—Yes.

457. Mr. *Wilson.*] Is your line kept as clear of the houses as possible?—We have altered the line, and brought it near to the road, to prevent destroying many houses.

458. Mr. *Coomara Swamy.*] Will many houses be destroyed?—There are no houses destroyed, only hopper shops by the side of the road; and the greatest extent of paddy fields we shall take is from 25 to 30 acres.

459. Mr. *Wilson.*] Did the villagers point out any high land on the other side of the paddy fields?—I don't exactly know what they refer to; they had a trace which they shewed, but I don't know whether they mean that. That would not suit the purpose: it would be a long way too high.

460. The *Colonial Secretary.*] Does your trace go through any gardens?—No; no gardens whatever on the Pérádeniya side of Gampola. We have done everything we could to avoid doing damage.

The *Governor.*] I saw the petitioners the week before last, when I was up-country, and I left them perfectly satisfied that we would do all that we could. They had greatly overrated the quantity of land we were to take, and thought we were going to take away some hundreds of acres instead of merely 25 to 30. I told them that they would be fully compensated, and that if there were any Crown lands which would suit their purpose, Government would consider any application they made respecting them.

461. The *Auditor-General.*] With regard to the return relating to the cost per ton per mile of goods traffic, would it be reliable?—It would simply be figures: you would work out a certain result. The only way to calculate it would be to take out a certain proportion for passenger traffic.

[*Examination ended.*]

APPENDIX.

No. I.

STATEMENT of Earthwork on the Dimbula and Dik Oya Roads.

1	2	3	4	5	6	7	8	9	10	11	12	13	
Year of Construction.	Number of Miles.	Quantity of Work in Cutting.	Slope at which Bank is cut.	Height of Cutting, ft.	Average height of Cutting, ft.	Average slope of ground on higher side.	General line of Country on which the roads are made.	Average sectional Area of Cutting.	Average Sectional Area of Banks, Sq. ft.	Quantity of earth-work per mile.	Cost of earth-work per mile, including rock	Cost per cubic yard.	
DIMBULA	ROAD.										£ s. d.		
1863	2	28,808	¼ to 1	Plan in Kandy. Information will be supplied later	do.	Not given in sections.	Hill side	The information required will be forwarded when it has been worked out.	Plan in Kandy. Information will be supplied later	14,404	506 0 0	8·4*d.*	
1864	3	41,115	do.				do.			13,705	496 14 10	8·7*d.*	
1865	3	43,360	do.				do.			14,458	527 13 4	8·8*d.*	
1866—1868	3	60,000	do.				do.			20,000	711 13 4	8·5*d.*	
1870	1·6	30,738	do	3′ to 20′	9′		do.		None	19,242	856 10 9	10·7*d.*	
1871	4	60,770	do.	2′ to 29′	9·3		do.		71	15,192	639 3 6	10 1*d.*	
Total—	16·6	264,791	do.	—	—		do		—	15,951	610 5 9	9·2*d.*	Only 3 chains of embankment.
DIK OYA	ROAD												
1867—1870	14	197,565	¼ to 1	2′ to 22′	8		Hill side		82	14,112	658 3 2	11·2*d.*	Only 2 chains of embankment.
1871	4	61,846	do.	2′ to 24′	8·6		do.		—	15,461	637 14 5	10·1*d.*	Two short embankments.
Total—	18	259,411	do.	—	8·2		do.		—	14,412	653 12 4	10·9*d.*	
On both Roads...	34·6	524,202	do.	—	—		do.		—	15,150	633 6 1	10*d.*	

Greatest gradient 1 in 20.

N.B.—No. 3 includes embankments which cannot be separated from cuttings.

25 per cent. should be added to above rates to cover cost of Establishment, Departmental, and Contingent charges.

Colombo, 23rd December, 1870.

A. B. FYERS,
Capt. R. E.

LEGISLATIVE COUNCIL.
Proceedings.
RAILWAY EXTENSION.
Appendix.

No. II.

RAILWAY EXTENSION.

Revised Estimated Receipts and Profit on a Railway from Pérádeniya to Gampola, 7 miles, and from Gampola to Náwalapitiya, 10 miles,—Total 17 miles.

				£
Pérádeniya to Gampola, 7 miles.				
27,375 tons "Up" at 4*d.* per ton per mile, 7 miles	=	2*s.* 4*d.*	=	3,194
30,425 „ "Down" „ 3½*d.* „ „ 7 „	=	2*s.* 0½*d.*	=	3,106
Passengers, Parcels, &c., £225 per mile for 7 miles		...	=	1,575
		Total ...		£7,875

				£	
Gampola to Náwalapitiya, 10 miles.					
13,400 tons "Up" at 4*d.* per ton per mile, 10 miles	=	3*s.* 4*d.*	=	2,233	
15,400 „ "Down" „ 3½*d.* „ „ 10 „	=	2*s.* 11*d.*	=	2,246	
Passengers, Parcels, &c., £112 per mile for 10 miles		... ...	=	1,120	
		Total ...		£5,599	
					5,599
					£13,474
Deduct Working Expenses					6,945
Net Profit on 17 Miles' Extension					£6,529

Main Line.—Pérádeniya to Colombo.	£		
7,375 tons "Up" at 22*s.* 0*d.*	= 8,112		
8,425 „ "Down" „ 17*s.* 9*d.*	= 7,477		
Passengers, Parcels, &c. ..	= 2,000		
	17,589		
Deduct Working Expenses	1,759		
Net Profit on Main Line ...		...	15,830
Saving on Upkeep of road from Pérádeniya to Náwalapitiya ...		...	2,040
Total Profit on Extension to Náwalapitiya		..	£24,399

E. Robinson,
Traffic Manager.

Colombo, 22nd December, 1870.

No. III.

Statement shewing the Tonnage of Goods, the Gross Receipts and Expenditure, and the Per-centage of Working Expenses to Gross Receipts, on the four principal Railways in India, in the year 1869.

Railway.	Tonnage of Goods.	Gross Receipts.	Gross Expenditure.	Per centage of Working Expenses to Gross Receipts.
	Tons.	£	£	
East Indian	1,223,750	2,481,913	1,035,592	41·72
Great Indian Peninsula	839,075	1,448,443	967,427	66·78
Madras	442,722	562,630	276,618	49·16
Bombay, Baroda, and Central India ..	181,363	441,831	335,207	75·84

E. Robinson,
Traffic Manager.

Colombo, 22nd December, 1870.

No. IV.

Statement shewing the Tonnage of Manures carried over the Line in the years 1868, 1869 and 1870.

1868—3,664 Tons.
1869—6,891 „
1870—8,700 „

E. Robinson,
Traffic Manager.

Colombo, 22nd December, 1870.

I.

CORRESPONDENCE.

RELATING TO

RAILWAY EXTENSION

IN

CEYLON.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
PRINTED BY WILLIAM SKEEN, GOVERNMENT PRINTER,
CEYLON.

1870.

SCHEDULE.

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CORRESPONDENCE

RELATING TO

RAILWAY EXTENSION

IN

CEYLON.

No. 1.

Mr. CARDWELL to the OFFICER ADMINISTERING THE GOVERNMENT OF CEYLON.

CEYLON.
No. 61.

Downing Street,
March 10th, 1865.

No. 1.
Mr. Cardwell to the Officer Administering the Government of Ceylon.

SIR,

WITH reference to Major-General O'Brien's Despatch No. 121 of the 9th June last, I transmit to you a copy of a letter from the Chairman of the Ceylon Company Limited, requesting that the proposal of the Company to construct Branch Railways in Ceylon may be reconsidered.

Since the date of the Report of the Committee of your Government, to whom this subject was referred, the works on the main line have doubtless been much advanced; and it appears to me, that if it is really desirable to construct the subsidiary lines, there will be an obvious advantage in deciding upon their construction soon enough to enable Mr. Faviell to tender for them, or for some of them, before his plant is broken up and his laborers dispersed.

In forwarding the enclosed letter for the consideration of your Council, I must not be understood as anticipating their decision, either upon the general question, whether the lines would be more advantageously constructed by a Company than by the Government, or on the propriety of the particular concessions required by the Company.

I have, &c.,
(Signed) EDWARD CARDWELL.

The OFFICER ADMINISTERING THE GOVERNMENT OF CEYLON.

Enclosure in No. 1.

Enclosure in No. 1.
Mr. Acland to the Under Secretary of State.

Mr. ACLAND to the UNDER SECRETARY OF STATE.

Ceylon Company Limited,
12, Leadenhall Street, E.C.,
21st February, 1865.

SIR,

1. WITH reference to my letter to you of the 15th December, 1863, and your reply dated the 28th July, 1864, I have the honor to request that you will submit to the Right Honorable the Secretary of State the following circumstances, which, I venture to hope, will be deemed sufficient to justify my asking for a reconsideration of the proposal of the Ceylon Company for constructing Branch Railways in Ceylon.

RAILWAY EXTENSION.

CORRESPONDENCE.

Enclosure in No. 1. Mr. Acland to the Under Secretary of State.

2. I believe the chief objection to considering the question last year was, the fear that the labour requisite for constructing the works could not be found without interfering with the works of the Trunk Railway, and thus injuring Mr. Faviell, the Contractor; but I now propose that the following conditions, which will obviate that objection, shall form the basis of our agreement with Government:—

1. That the contract for the works, under arbitration, shall be conceded to Mr. Faviell, who has expressed his willingness to undertake them in 16 months from this date.
2. That the conditions proposed shall refer only to the line between Péradeniya and Gampola; but that in case of any future extensions being proposed, a new agreement shall be made, the Government affording to this Company priority of refusal of any terms proposed.
3. I think that terms, at least as favorable as those granted to any of the Indian Tramway Companies, should be conceded to the proposed undertaking; but, as an alternative for the consideration of Government, I suggest that, in the event of the traffic not yielding a sufficient net profit to pay a dividend of 10 per cent. on the capital, an amount, equal to the amount annually voted for the repair of the present road from Gampola to Péradeniya, should be paid to the Company by Government, such amount to be calculated on the average of the votes for the five years antecedent to the opening of the line, minus however the amount actually expended for the maintenance of the road during the year in which the payment may be made.
4. That all Government land required for the construction of the line be made over to the Company free of cost, and powers granted for taking over any private land necessary to be acquired.
5. The rates to be fixed by arbitration, and to be open to reconsideration, in like manner, every six months; no reduction to be made in the rates till the profits realized exceed 15 per cent. per annum.
6. The Government to give all its influence to maintain co-operative working with the main line of Railway.
7. All materials to be imported duty free.

The Engineering proposals are as follows:—

1. That the speed shall average 12 miles an hour, inclusive of stoppages.
2. That the line shall be in all essentials a light line of Railway of single track.
3. That all rolling stock and engines shall be provided by the Company, and adapted only to the requirements of its own traffic.
4. That should a narrow gauge be determined upon, rails should be laid within those of the main line, to connect Gampola direct with Kandy.
5. That the curves should be limited to 3 chains' radius, and the gradient to 1 in 35.
6. That should the main line gauge be fixed upon, the Company should, under restriction, have the right of using the section of the main line rails for their through traffic between Gampola and Kandy.
7. It is declared that such a line would be equal to the transport of 1,000 tons daily, besides passenger traffic.

3. The Direction of this Company feel that the question of the gauge to be adopted is one involving many difficulties, and a difference of opinion exists at present among its own members. I think the arguments in favor of a narrow gauge, say 3 feet 9 inches, may be stated as follows:—

In the first place, there is the question of economy in first construction. With limited speed however, the saving in using the narrow gauge would probably not exceed £500 per mile.

The arguments, however, upon which the supporters of the narrow gauge base their principle, are strong.

They are, namely, that the gauge of the main line, viz., of 4 feet 8½ inches, is inconsistent with the construction of a rolling stock sufficiently light to be worked by any but considerable locomotive power; or, even supposing that such rolling stock could be constructed, it must be at such a sacrifice of strength as to render it wholly unfit for travelling at the high speed of the main line. The advantage of broad gauge would be therefore almost entirely negatived, and, if adopted, it would practically close many routes accessible to narrow gauge, impracticable for the broader gauge, with its heavy waggons and limited curves.

It is proposed, in order to overcome all difficulties of transit, so to construct the frames of the waggons, that their contents may be lifted *en masse* by a travelling overhead crane into the main line trucks, so that bulk would never once be broken, and all the advantages due to like gauge would thus be secured.

Mr. Smart, in reporting on the line from Kandy to Colombo, wrote:—"If I were called upon to initiate a system of Railways in a new country susceptible of long straight lines and curves of large radius, I should adopt the Indian gauge; in a country like Ceylon, where it is necessary to adopt extremely sharp curves, I should prefer the narrow English gauge."

If, however, the broad gauge be determined upon, it will of course involve extra expense in the earthworks, besides rendering it necessary to place the sleepers closer together, or the strengthening the rails and bridges, to admit of the heavier rolling stock being carried on the line.

It would be a *sine quâ non* in such case, that the waggons for the traffic to Colombo should be supplied by the main line, the Company finding only the locomotive power. It would of course be impossible for a line only 7 miles in length to provide rolling stock for another, 72 miles in length, which must moreover be much heavier than that demanded for its own purposes.

The speed would still be limited to 12 miles an hour. The passenger traffic from Colombo direct to Gampola would have to change at Péradeniya, as the large main line carriages could not, from their length, be worked round the sharp curves.

4. The Direction consider that both plans have their advantages and disadvantages, but consider the balance favorable to the narrow gauge. Should the Government, however, decide upon the broader gauge, the Direction consider that, in the event of 10 per cent. not being realized, interest at that rate upon the extra cost involved should be made good by the Government.

If Government determine to accede to our proposals, we will have the necessary surveys made without loss of time.

I have, &c.,

(Signed) LAWFORD ACLAND,
Chairman of the Ceylon Company Limited.

The UNDER SECRETARY OF STATE
FOR THE COLONIES.

No. 2.

No. 2.
Governor Sir H. Robinson to Mr. Cardwell.

Governor Sir HERCULES ROBINSON to Mr. CARDWELL.

No. 38.
Miscellaneous.

Pavilion, Kandy,
May 27th, 1865.

SIR,

I HAVE the honor to acknowledge your Despatch No. 61 of the 10th March last, transmitting copy of a letter from the Chairman of the Ceylon Company Limited, requesting that the proposal of the Company to construct Branch Railways in Ceylon may be reconsidered.

I directed your Despatch and its enclosures to be referred to a Committee, consisting of the Treasurer, the Auditor-General, and the Chief Resident Engineer, Ceylon Railway; and I now enclose copy of a Report from these gentlemen, with their remarks on the concessions desired by the Company.

Looking to the fact that the plans of the Company are considerably modified, their proposals being now limited to the construction of a line of Railway from Péradeniya to Gampola, with the stipulation that fresh agreements should be entered into before any extension beyond the latter town be commenced, the Committee are of opinion, that the construction of the line to Gampola should not be given to them, but that it should be undertaken by the Government.

In this opinion both myself and my Executive Council entirely concur; and if the proposal meets with your approval, it will be necessary to take the requisite steps for carrying out the project as soon as Mr. Faviell will be in a position to tender for it. He will not be prepared to undertake the work until the expiry of eighteen months or two years from the present time.

In the meanwhile, I have to solicit the sanction of Her Majesty's Government, for at once making the requisite survey, with a view to ascertain the probable expense of the undertaking, and to enable this Government to submit definite proposals as to the means of providing the necessary funds.

I have, &c.
H. G. R. ROBINSON.

The Right Hon'ble
EDWARD CARDWELL, M.P.

Enclosure in No. 2. Messrs. F. Saunders, R. T. Pennefather, and Guilford L. Molesworth, to the Hon'ble the Colonial Secretary.

Enclosure in No. 2.

Messrs. F. SAUNDERS, R. T. PENNEFATHER, and GUILFORD L. MOLESWORTH, to the Hon'ble the COLONIAL SECRETARY.

Colombo, May 1st, 1865.

SIR,

IN compliance with the instructions conveyed in your letter of the 11th ultimo, the enclosures of which are herewith returned, we have carefully considered the Despatch of the Secretary of State, with the documents appended thereto.

We have now the honor to submit our Report thereon.

2. We agree in opinion with the Committee who last year had their attention directed to this subject, that the local Government should not, except with Mr. Faviell's consent, countenance any project, the prosecution of which would interfere with his supply of labour. Looking to the importance of the enterprise in which he is engaged, and to the deep stake which the Colony has in its success, we consider that it would be in the highest degree impolitic to take any steps which might render more difficult the completion of the main line from Colombo to Kandy. Mr. Faviell deprecates any competition in the labour market before eighteen months or two years from this time. We are prepared, for the reason above stated, to support him in this remonstrance.

3. The former Committee, while recommending a postponement of the works, fully recognized the importance of the plan of branch lines then set forth, and desired to give eventually all reasonable facilities to the Company's scheme.

The plans of the Company, however, appear to be now considerably modified, as their proposals are expressly limited to the construction of a line from Péradeniya to Gampola; and they stipulate that fresh agreements should be entered into before any extension beyond the latter town be commenced.

4. We consider that these limitations have so changed the nature of the proposals, that we are unable to recommend a favourable consideration of their request. It is, in our opinion, only when looking on the Gampola line as a link in a large network of branch Railways, acting as feeders to the trunk road, that the inconveniences attaching to the working and partial management of the last by an independent Company could be overlooked, and the concession of a branch, at once so valuable and so easily constructed, given up by Government.

5. The Gampola line should be, as recommended by the former Committee, a first class one, similar in gauge and construction to the main road; and we believe that it would be better for Government to undertake to make the one, as it is already carrying on the other to completion. If His Excellency concurs in this view, steps might be taken to procure the sanction of the Secretary of State to the survey of the line, and the introduction of the necessary Ordinances; so that when the Kandy trunk road is approaching completion, the requisite staff and plant might be immediately transferred to the Gampola line.

6. This would not interfere with the construction by the Company, at the expiration of the interval specified by Mr. Faviell, of light branch lines or feeders, connected at different points with the main roads.

7. The line from Polgahawela to Kurunégala might also be reserved, until after careful survey, as a first class railroad, the construction of which might be undertaken by Government.

8. We annex a copy of the concessions desired by the Company, with our remarks thereon in the margin.

9. If it be thought desirable to carry further the negotiations with the Ceylon Company, we would suggest that they should be invited to depute some one here, who might be duly authorized to discuss the scheme with us, and settle it definitively.

10. If it be decided eventually to grant the concession sought for to the Ceylon Company, steps might be taken, with the least practicable delay, for undertaking the necessary preliminary operations both here and in England, so that when the interval stipulated for by Mr. Faviell has expired, the Company may be in a position at once to commence active operations on the ground.

We have, &c.,

(Signed) F. SAUNDERS,
Treasurer.

R. T. PENNEFATHER,
Auditor-General.

GUILFORD L. MOLESWORTH,
Chief Resdt. Engineer.

The Hon'ble
The COLONIAL SECRETARY.

Sub-Enclosure in No. 2.

Mr. Acland to the Under Secretary of State.

Ceylon Company Limited,
12 Leadenhall Street, E.C.,
21st February, 1865.

Sir,

1. With reference to my letter to you of the 15th December, 1863, and your reply dated the 28th July, 1864, I have the honor to request that you will submit to the Right Honorable the Secretary of State the following circumstances, which, I venture to hope, will be deemed sufficient to justify my asking for a reconsideration of the proposal of the Ceylon Company for constructing Branch Railways in Ceylon.

2. I believe the chief objection to considering the question last year was, the fear that the labour requisite for constructing the works could not be found without interfering with the works of the Trunk Railway, and thus injuring Mr. Faviell, the Contractor; but I now propose that the following conditions, which will obviate that objection, shall form the basis of our agreement with Government:—

Remarks of Committee.

1. That the contract for the works, under arbitration, shall be conceded to Mr. Faviell, who has expressed his willingness to undertake them in 16 months from this date.

2. That the conditions proposed shall refer only to the line between Pérádeniya and Gampola; but that in case of any future extensions being proposed, a new agreement shall be made, the Government affording to this Company priority of refusal of any terms proposed.

The undertaking as a whole should be guaranteed, to induce Government to concede the valuable and easily constructed Gampola Branch.

3. I think that terms, at least as favorable as those granted to any of the Indian Tramway Companies, should be conceded to the proposed undertaking; but, as an alternative for the consideration of Government, I suggest that, in the event of the traffic not yielding a sufficient net profit to pay a dividend of 10 per cent. on the capital, an amount, equal to the amount annually voted for the repair of the present road from Gampola to Pérádeniya, should be paid to the Company by Government, such amount to be calculated on the average of the votes for the five years antecedent to the opening of the line, minus however the amount actually expended for the maintenance of the road during the year in which the payment may be made.

The propositions made by the former Committee were based upon the agreements of the London Tramway Companies, as suggested by the Ceylon Company; the only modifications being in those clauses which were inapplicable to altered conditions of Ceylon.

By this proposition the Government would practically have to undertake the upkeep, and receive no tolls.

4. That all Government land required for the construction of the line be made over to the Company free of cost, and powers granted for taking over any private land necessary to be acquired.

Virtually approved by the former Committee.

5. The rates to be fixed by arbitration, and to be open to reconsideration, in like manner, every six months; no reduction to be made in the rates till the profits realized exceed 15 per cent. per annum.

The rates of the more expensive main line (more expensive both in construction and maintenance) would leave ample margin for profit.

6. The Government to give all its influence to maintain co-operative working with the main line of Railway.

Fair and reasonable.

7. All materials to be imported duty free.

Practically approved of by the former Committee, but the articles should be specified by a list.

The Engineering proposals are as follows:—

1. That the speed shall average 12 miles an hour, inclusive of stoppages.

Previously approved.

2. That the line shall be in all essentials a light line of Railway of single track.

Inadmissible for the Gampola Branch.

3. That all rolling stock and engines shall be provided by the Company, and adopted only to the requirements of its own traffic.

4. That should a narrow gauge be determined upon, rails should be laid within those of the main line, to connect Gampola direct with Kandy.

Dangerous and unnecessary.

5. That the curves should be limited to 3 chains' radius, and the gradient to 1 in 35.

Not without special arrangements in the rolling stock for going round curves. Nothing less than 10 chains' radius is admissible on the Gampola Branch.

Not admissible.

6. That should the main line gauge be fixed upon, the Company should, under restriction, have the right of using the section of the main line rails for their through traffic between Gampola and Kandy.

7. It is declared that such a line would be equal to the transport of 1,000 tons daily, besides passenger traffic.

3. The Direction of this Company feel that the question of the gauge to be adopted is one involving many difficulties, and a difference of opinion exists at present among its own members. I think the arguments in favor of a narrow gauge, say 3 feet 9 inches, may be stated as follows:—

Probably, but varying very much with the features of the country.

In the first place, there is the question of economy in first construction. With limited speed, however, the saving in using the narrow gauge would probably not exceed £500 per mile.

The gauge of the main line is 5 ft. 6 in. The former Committee did not oppose the construction of narrow gauge branches, except on the important branches for the main line, when uniformity of gauge might be justified by the amount of traffic and the features of the country.

The arguments, however, upon which the supporters of the narrow gauge base their principle, are strong.

They are, namely, that the gauge of the main line, viz., of 4 feet 8½ inches, is inconsistent with the construction of a rolling stock sufficiently light to be worked by any but considerable locomotive power; or, even supposing that such rolling stock could be constructed, it must be at such a sacrifice of strength as to render it wholly unfit for travelling at the high speed of the main line. The advantage of broad gauge would be therefore almost entirely negatived, and, if adopted, it would practically close many routes accessible to narrow gauge, impracticable for the broader gauge, with its heavy waggons and limited curves.

Approved.

It is proposed, in order to overcome all difficulties of transit, so to construct the frames of the waggons, that their contents may be lifted *en masse* by a travelling overhead crane into the main line trucks, so that bulk would never once be broken, and all the advantages due to like gauge would thus be secured.

The question of gauge for the main line was fixed after much mature consideration. There are arguments both for and against each gauge, which were advanced by the advocates of either gauge when the question was brought before Government in 1858.

Mr. Smart, in reporting on the line from Kandy to Colombo, wrote:—"If I were called upon to initiate a system of Railways in a new country susceptible of long straight lines and curves of large radius, I should adopt the Indian gauge; in a country like Ceylon, where it is necessary to adopt extremely sharp curves, I should prefer the narrow English gauge."

To a very small extent on the Gampola branch, where the earthworks will be light, and the bridges not more than 2 or 3 in number.

If, however, the broad gauge be determined upon, it will of course involve extra expense in the earthworks, besides rendering it necessary to place the sleepers closer together, or the strengthening the rails and bridges, to admit of the heavier rolling stock being carried on the line.

The moveable bodies of the narrow gauge branch should be constructed of such dimensions that several of them would exactly fit the trucks of the main line. This would obviate the necessity for the construction of a special class of waggons for carrying the bodies of the branch waggons.

It would be a *sine quâ non* in such case, that the waggons for the traffic to Colombo should be supplied by the main line, the Company finding only the locomotive power. It would of course be impossible for a line only 7 miles in length to provide rolling stock for another, 72 miles in length, which must moreover be much heavier than that demanded for its own purposes.

The speed would still be limited to 12 miles an hour. The passenger traffic from Colombo direct to Gampola would have to change at Péradeniya, as the large main line carriages could not, from their length, be worked round the sharp curves.

4. The Direction consider that both plans have their advantages and disadvantages, but consider the balance favorable to the narrow gauge. Should the Government, however, decide upon the broader gauge, the Direction consider that, in the event of 10 per cent. not being realized, interest at that rate upon the extra cost involved should be made good by the Government.

Inadmissible.

If Government determine to accede to our proposals, we will have the necessary surveys made without loss of time.

I have, &c.,
(Signed) LAWFORD ACLAND,
Chairman of the Ceylon Company Limited.

The UNDER SECRETARY OF STATE
FOR THE COLONIES.

No. 3.

Mr. CARDWELL to Governor Sir HERCULES ROBINSON.

No. 3.
Mr. Cardwell to Governor Sir Hercules Robinson.

Ceylon.
No. 190.

Downing Street,
19th August, 1865.

SIR,

I have to acknowledge your Despatch No. 38, dated the 27th May last, applying for authority to make a survey of a projected branch line of Railway from Pérádeniya to Gampola, with a view to ascertain the probable cost of the undertaking.

2. You submit no estimate of the probable cost of this survey, but Her Majesty's Government conclude that it will not be great, as the proposed line is stated in the correspondence to be only about 7 miles in length. They therefore give their sanction to the survey, and its attendant expenditure, without first calling for an estimate,—subject of course to your obtaining the necessary appropiation from the Legislative Council,—and also, upon the understanding that Her Majesty's Government are to be entirely free to give or withhold their sanction to the execution of the proposed work, according to such judgment as they may hereafter form of its expediency on receipt of the estimates to be made, which, as I need hardly remind you, ought to embrace not only construction expenditure, but annual working expenditure, and expected traffic receipts.

I have, &c.,
EDWARD CARDWELL.

Governor Sir H. ROBINSON,
&c., &c., &c.

No. 4.

Governor Sir HERCULES ROBINSON to LORD CARNARVON.

No. 4.
Governor Sir Hercules Robinson to Lord Carnarvon.

No. 2.
Miscellaneous.

Queen's House, Colombo,
Ceylon, January 9th, 1867.

MY LORD,

IN pursuance of the authority conveyed to me in Mr. Cardwell's Despatch, No. 190 of the 19th August, 1865, I directed the Director-General of the Ceylon Railway to cause a survey to be made of the proposed extension of the Railway from Pérádeniya to Gampola, with a view to ascertain the probable cost of the undertaking.

2. Owing to the illness of the Engineers employed on this work, and the death of one of them, and other causes, there has been some delay in the completion of the work. I have now the honor to enclose copies of the Reports received from the Director-General, with the connected correspondence.

3. The estimate at first submitted by Mr. Molesworth of the cost of the line amounted to £165,400, exclusive of the cost of rolling stock and machinery, and other expenses, amounting to £60,000, making the total estimate £225,400; whilst the return from traffic was estimated at £7,650, and the working expenses at £4,800 per annum.

4. This estimate was much larger than was originally anticipated, owing to the adoption of a high level to provide for the contingency of an extraordinary flood, such as had occurred in the year 1837; and, as according to the estimate the traffic receipts would do little more than defray the working expenses, leaving no return to the Colony for the original outlay, my Executive Council concurred with me in considering, that the extension of the line to Gampola could not, under such conditions, prudently be entertained; and the Director-General was instructed to reconsider his estimate, with a view either to the alteration of the level or the adoption of another line.

5. In compliance with these instructions, a revised estimate has been submitted by Mr. Molesworth, in which he has been able to make a large reduction on his first estimate by lowering the level of the Railway through the Districts liable to flood—which it is thought may with perfect safety be done, as the circumstances of the country have much changed since the year 1837—and by the selection of a new site for the Gampola terminus. This reduced estimate, which amounts to £139,750, was referred to the Civil Engineer to report whether, if the work were to be executed by his Department, a further reduction could be made in the estimate. The estimate submitted by the Civil Engineer, based upon the quantities furnished by the Director-General, amounts to £112,601, shewing a further reduction of £27,149.

6. The question of receipts from traffic was also reconsidered; and a revised estimate has been submitted by the Director-General, in which the estimated quantities remain as before, but an addition has been made to the rates to be charged, as these, on investigation, appeared unduly low. The Government Agent for the Central Province has also furnished an estimate, after consulting proprietors of estates, and others interested in Coffee plantations. Mr. Molesworth's amended estimate of traffic amounts to £11,750 per annum, at

From Director-General, Ceylon Railway, August 28, 1866, No. 246.
Do. do. August 31, 1866, No. 249.
To Civil Engineer and Commissioner of Roads, September 10, 1866, No. 1,009.
From do., September 12, 1866, No. 902.
To Director-General, Ceylon Railway, September 24, 1866.
From do, September 28, 1866, No. 276.
From do., November 16, 1866, No. 345.
To do November 22, 1866.
From do. December 1, 1866, No. 368, and enclosure
To Civil Engineer and Commissioner of Roads, December 11, 1866, No. 1,390.
From do. December 28, 1866, No 1,283, and enclosure.
To Government Agent, Kandy, September 24, 1866, No. 374.
From do., December 17, 1866, No. 523, and enclosure.

RAILWAY EXTENSION.

CORRESPONDENCE.

No. 4.
Governor Sir Hercules Robinson to Lord Carnarvon.

the rate of 5*s.* per ton for goods, and 1*s.* 6*d.* for all passengers. The quantities estimated by the Government Agent as likely to be carried exceed those anticipated by the Director-General, but his estimated traffic receipts amount only to £9,032 10*s.*, as he has taken the Director-General's original rates of 3*s.* per ton for goods, and for passengers 1*s.* 6*d.* between Gampola and Kandy, and 1*s.* for passengers proceeding direct from Colombo. As however it may be presumed that the Government Agent has better means of securing correct information as to the probable extent of the traffic, the estimate of receipts may, I think, be fairly based upon the quantities furnished by him. Taking therefore these quantities, and the rates of charges given by the Director-General, the return from traffic may be estimated at about £12,500 per annum.

Estimate of Traffic of Government Agent £9,032 10*s.*
Add
Increased amounts according to rates of Director-General, viz.: for 23,000 tons, at 2*s.* additional per ton £2,300 0*s.*
Through passengers, 160 per day, at 6*d.* additional per day for 365 days £1,460 0*s.*
£3,760 0*s.*
£12,792 10*s.*

7. The subject has been carefully considered by me and my Executive Council. The Council concur with me in thinking, that it may be fairly assumed that the Railway to Gampola may be completed for the sum of £120,000, being nearly the mean between the estimate of the Director-General and that of the Civil Engineer. The working expenses are estimated by Mr. Molesworth, in his revised estimate, at £4,350 per annum. Deducting this from the estimate of receipts, as given above, £12,500, the profit will amount to £8,150, or more than 6¾ per cent. on the capital to be expended on the construction of the line.

8. Under these circumstances my Executive Council concur with me in thinking, that it would be desirable that the work should be undertaken as soon as possible.

9. With regard to the funds to be provided for this work, I beg to refer Your Lordship to my Despatch No. 193 of the 30th August last, in which I pointed out that there would be a saving of £100,000 in the funds provided for the construction of the Railway from Colombo to Kandy, and suggested that £50,000 of this saving should be devoted to the extension of the Railway to Gampola. It is probable that the savings may amount to a larger sum; and my Executive Council concur with me, in recommending that £60,000 from the Debentures authorized for the construction of the Railway from Colombo to Kandy, be appropriated for the extension of the line to Gampola, the remaining £60,000 being provided from surplus balances and general revenue, in the proportion of £50,000 from the former, and £10,000 from the latter source. In the hope that this proposal will be sanctioned by Her Majesty's Government, the Legislative Council has only appropriated in the Surplus Funds Ordinance of this Session £170,000 out of the £220,000 net available unappropriated cash balance which existed on the 1st January, 1866, as reported in my Despatch No. 128 of the 22nd June last.

10. Mr. Faviell has been invited to inspect the plans and sections of the line, with a view of enabling him to tender for its construction, if he should be so disposed. Mr. Molesworth submits that it would be preferable that the work should be given on contract, instead of its being executed by the Government; as, whilst the former would be a *bonâ fide* offer to be carried out by those experienced in Railway work, in the latter case it is possible that the estimate of the Civil Engineer might be exceeded. In this opinion I concur; and if Mr. Faviell's tender is not much in excess of the amount for which it has been estimated that the work can be completed by the Civil Engineer's Department, I think it would be desirable that its execution should be entrusted to him. If, however, Mr. Faviell's tender should exceed £120,000, the extension should, I think, be undertaken by the Government, which ought—with the additions which have lately been sanctioned to the Pioneers and to the Civil Engineer's Department—to be able to carry out without difficulty a short extension of this description. In the case of the work being entrusted to Mr. Faviell, it will be necessary that he should be allowed to commence it before his plant is broken up, and his staff of Engineers and labourers dispersed. I beg, therefore, to be favoured with the early decision of Her Majesty's Government on the recommendations now submitted.

I have, &c.,
H. G. R. ROBINSON.

The Right Honorable
The EARL OF CARNARVON,
&c, &c., &c.

Enclosure No. 1 in No. 4.
Report on Gampola Survey.

Enclosure No. 1 in No. 4.

REPORT on Gampola Survey.

No. 246.

Ceylon Railway,
Colombo, 28th August, 1866.

SIR,

I HAVE the honor to submit, for the information of His Excellency the Governor, the following particulars respecting the Gampola Railway.

2. A very serious delay has occurred in the survey from causes entirely beyond my control.

3. In February last, as soon as funds were placed at my disposal for the purpose, I detached Mr. Horn for the work, but, unfortunately, soon after he commenced he was

seized with the illness which subsequently proved fatal to him. I could not well spare another Assistant from the construction of the Ceylon Railway, and Mr. Horn was unwilling to quit the work, but struggled on, under the impression that his illness was of such a character that his health would shortly be re-established. It became evident however, at last, that it was of a more serious character than he had imagined, and in May last he was invalided to Colombo, and Mr. Foot was drafted from the Maha Oya district to fill his place; Mr. Foot however had not been long at the work before he was attacked by fever, but aware of my anxiety for the speedy completion of the work, he, nevertheless, for some time tried to carry on the work, until at length he was completely prostrated, and I found him so seriously ill that I was unable even to move him to Colombo; some weeks elapsed before he had sufficiently recovered to return to work. I therefore placed Mr. McBean on the survey, but as he could not be well spared from the superintendence of the construction, he could only devote a portion of his time to the work, and he too was attacked by fever, though not so seriously as Mr. Foot, so that the whole of the field work only reached me yesterday. I have however, from to time, arranged for the transmission to me of such portions as were completed, and have kept up the Office work in such a manner as to be in a position to complete my Report immediately after the arrival of the last portion of field work.

4. The total length of the Railway is 7¾ miles.

5. The gradients are in no places steeper than 1 in 200, (and with the exception of a 10 chain curve at Pérádeniya, and two 10 chain curves about the 5th mile, where they are unavoidable, except at a very heavy cost) the curves are not sharper than 20 chains radius.

6. The works on the Gampola Railway will be of a more expensive character than I had originally anticipated, owing to the excessive height of extraordinary floods, which a detailed examination of the district proves to be far greater than is generally supposed.

7. This extreme height of flood level not only largely augments the magnitude and cost of the earthworks, but also causes a considerable increase in the waterways, and renders heavy viaducts necessary where, with a lower flood level, culverts would suffice.

8. The following is my estimate of the cost of the line:—

Earthwork	£58,000
Bridges and Culverts	29,800
Retaining Walls	2,600
Stations, &c.,	16,600
Upkeep of Roads	500
Clearing Jungle, &c.	200
Extra provision for Irrigation and Drainage	600
Wire Fencing	4,100
Diversion of Roads	200
Foot-paths,	60
Signals	240
Medical and Police	500
Permanent Way	28,000
Sidings	9,000
Contingencies	15,000
	£165,400

9. If steel rails be adopted, a total sum of £7,500 will probably have to be added to the above.

10. In addition to the above, provision must also be made for the following items:—

Administration and Engineering	£8,000
Land and Compensation	13,000
Rolling Stock and Machinery,	32,000
Forming and improving road approaches	1,000
Telegraph	500
Contingencies	5,500
	£60,000

11. I estimate that the return from traffic will be £7,650 per annum; and that the working expenses will be £4,800 per annum.

12. I propose to send in further details as soon as they can be prepared.

I have, &c.,

(Signed) GUILFORD L. MOLESWORTH,
Director-General.

RAILWAY EXTENSION.

CORRESPONDENCE.

Enclosure No. 2 in No. 4.
The Director-General of the Ceylon Railway to the Hon'ble the Colonial Secretary.

Enclosure No. 2 in No. 4.

The DIRECTOR-GENERAL, Ceylon Railway, to the Hon'ble the COLONIAL SECRETARY.

No. 249.

Ceylon Railway,
Colombo, 31st August, 1866.

SIR,

WITH reference to my letter No. 246 of the 28th instant, on the subject of the Gampola Railway, I have the honor to inform you that I have invited Mr. Faviell to inspect the plans and sections of the line, with the view of enabling him to tender for its construction, if he should be so disposed.

At the same time, it may be a question for the consideration of Government, whether work, which would otherwise be done by contract, should not be done departmentally by the Pioneers of the Civil Engineer's Department, worked by their own officers under the general supervision of an experienced Railway Engineer, by whom the setting out would be performed.

The use of the trained workmen of the Pioneers might probably enable the work to be done at lower rates than those adopted by me in my estimate, and if the Government should entertain this idea, I will prepare a list of the quantities of the work, so as to enable the Civil Engineer and Commissioner of Roads to fill in the prices at which the work could be executed departmentally, and I can fill in any items, the cost of which cannot be conveniently filled in by the Civil Engineer and Commissioner of Roads, so as to complete the estimate.

Unless there should be a *very marked* difference between the estimate thus prepared by the Civil Engineer and the tender of Mr. Faviell, I would strongly advise the letting of the work by contract, as the former would only be an estimate, which might be executed, whilst the latter would be a *bonâ fide* offer, to be executed by those experienced in Railway work, and would in many respects be preferable to the former.

The Hon'ble
The COLONIAL SECRETARY,
Colombo.

I have, &c.,
GUILFORD L. MOLESWORTH,
Director-General.

Enclosure No. 3 in No. 4.
The Hon'ble the Colonial Secretary, to the Civil Engineer and Commissioner of Roads.

Enclosure No. 3 in No. 4.

The Hon'ble the COLONIAL SECRETARY to the CIVIL ENGINEER AND COMMISSIONER OF ROADS.

No. 1,009.

Colonial Secretary's Office,
Colombo, 10th September, 1866.

SIR,

I AM directed to forward to you the accompanying copy of a letter from the Director-General of the Ceylon Railway, and I am to request that you will report the rate at which you could execute the earthwork, &c., required for the proposed extension of the Railway to Gampola.

The CIVIL ENGINEER AND
COMMISSIONER OF ROADS,
Colombo.

I have, &c.,
(Signed) JAMES SWAN.

Enclosure No. 4 in No. 4.
The Civil Engineer and Commissioner of Roads to the Hon'ble the Colonial Secretary.

Enclosure No. 4 in No. 4.

The CIVIL ENGINEER AND COMMISSIONER OF ROADS to the Hon'ble the COLONIAL SECRETARY.

No. 902.

Commissioner of Roads and
Civil Engineer's Office,
Colombo, 12th September, 1866.

SIR,

WITH reference to your letter No. 1,009 of the 10th instant, forwarding copy of one from the Director-General of the Ceylon Railway, and requesting me to report the rate at which this Department can execute the earthwork, &c., of the proposed extension of the Railway to Gampola, I have the honor to submit an estimate, based on the quantities furnished by Mr. Molesworth, of the probable cost of the work if executed by the Department.

My rates for earthwork are higher than those at which we generally work, but not higher than it is necessary to fix them at with reference to the circumstances under which this work must be done, and which differ in some respects materially from those affecting ordinary road works.

Enclosure No. 4 in No. 4.
The Civil Engineer and Commissioner of Roads to the Hon'ble the Colonial Secretary.

My rates for masonry in bridges, culverts, and retaining walls are considerably higher than those at which such work is ordinarily executed in connection with roads; but it must be borne in mind, that ordinary road masonry would not bear the wear and tear of Railway traffic, and that masonry, to withstand the effects of this, must be of a superior kind to that which we commonly have occasion to execute.

I have left untouched some items in the Director-General's estimate, as I have not the data necessary to enable me to question them.—Others I have reduced, without reference to quantities, but on the general assumption, that the much lower rates at which we can execute earthwork and masonry may safely be applied to these.

With respect to the additional items under paragraph 10 in the Director-General's letter, and amounting in all to £60,000, I am not in a position to offer any decided opinion. The land, for instance, required for the Railway, and estimated to cost £13,000, would not fetch £5,000 at a Fiscal's sale, or if sold to private parties, but a fancy price would no doubt be put on it by Assessors appointed to value it for Railway purposes.

I should observe, that the estimate given by me cannot be considered as final, for I understand that the Director-General has under consideration a modification of his plans, which will result in a great reduction in the quantity of work upon which his estimate and mine are based.

The Hon'ble
The COLONIAL SECRETARY.

I have, &c.,
H. BYRNE.

Estimate referred to.

	£	s.	d.	£	s.	d.
277,000 cubic yards Embankment from side cutting, at 8*d.*	9,233	6	8			
260,000 do. do. at 1*s.*	13,000	0	0			
56,940 do. Cutting in Earth and removal, at 9*d.*	2,135	5	0			
70,160 do. Rock and removal, at 2*s.* 6*d.*	8,770	0	0			
Making good subsidence in Embankment ...	2,000	0	0			
Side drains, turfing, &c.	800	0	0			
...				35,938	11	8
15,235 cubic yards Masonry in Bridges and Culverts at 18*s.*	13,711	10	0			
1,500 do. in Retaining walls at 15*s.* ...	1,125	0	0			
Stations	12,000	0	0			
Upkeep of roads	400	0	0			
Clearing jungle	150	0	0			
Extra provision for irrigation	500	0	0			
Wire fencing	4,100	0	0			
Diversion of roads	150	0	0			
Foot-paths	60	0	0			
Signals...	240	0	0			
Medical and Police		...				
Permanent Way	28,000	0	0			
Sidings	9,000	0	0			
...				69,426	10	0
				105,375	1	8
Contingencies			...	10,537	10	2
			Total—	£115,912	11	10

H. BYRNE.

Enclosure No. 5 in No. 4.

The Hon'ble the COLONIAL SECRETARY to the DIRECTOR-GENERAL of the Ceylon Railway.

Enclosure No. 5 in No. 4
The Hon'ble the Colonial Secretary to the Director-General of the Ceylon Railway.

Colonial Secretary's Office,
Colombo, 24th September, 1866.

SIR,

I HAVE laid before the Governor and the Executive Council your letters Nos. 246 and 249 of the 28th and 31st ultimo, on the subject of the Gampola Railway.

2. In reply, I am directed to acquaint you that the extension of the line to Gampola, on the estimate submitted by you, is inadmissible; and I am to request you will reconsider the question, and report whether it is absolutely necessary to adopt a level to meet a contingency which is not likely to take place, as in no one year, before or since 1837, has the flood attained such a height as it did in that year.

3. If you are of opinion that the level cannot be altered, you will examine and report whether a line cannot be adopted, either along the course of the present road to Gampola, or by branching off somewhere between Kaduganáwa and Pérádeniya.

I have, &c.,
(Signed) JAMES SWAN.

The DIRECTOR-GENERAL
of the Ceylon Railway.

RAILWAY EXTENSION.

CORRESPONDENCE.

Enclosure No. 6 in No. 4.

The Director-General of the Ceylon Railway to the Hon'ble the Colonial Secretary.

Enclosure No. 6 in No. 4.

The DIRECTOR-GENERAL, Ceylon Railway, to the Hon'ble the COLONIAL SECRETARY.

No. 276.

Ceylon Railway,
Colombo, September 28th, 1866.

SIR,

IN reply to your letter of the 24th instant, on the subject of the Gampola line, I have the honor to inform you that, shortly after I sent in my estimate of the 28th August, I directed Mr. Foot to take a series of flying levels along the valleys traversed by the Gampola and Kandy road, with the view of ascertaining whether any saving might be effected by taking that direction; but I must admit, that I am not sanguine in my expectation that any material saving can be effected by that route, which would involve worse gradients and a more inconvenient junction with the main line.

By taking the direction of the road heavy works would be necessitated both in entering and again in leaving the road, and but little advantage would be gained, as nearly all the light portion of the present trace would be avoided, although it would be necessary to adopt the more expensive portion. The only alternative plans open for consideration are:—1st, the east bank, or Kandy side, of the Mahawela Ganga; 2nd, the valley of Illukowata near Kadugannáwa.

A very cursory glance at the former is sufficient to shew that it would be so very much more expensive than the line which has been traced, as to exclude it at once from further consideration.

The waterways on the east bank are more numerous, and the low-lying lands more frequent, so that both bridges, culverts, and earthworks upon it would be far more heavy than on the west bank; on the other hand, the valley of the Illukowata, though for a few miles it promises well, leads into a *cul de sac* bounded by very rugged country, from which it would be impossible to emerge with any reasonable gradients or works.

The question of keeping a lower level than that of the highest known flood is dangerous in Railways with high banks; but I will carefully consider the question, with the view of shewing the amount which may be saved by so doing.

The annexed rough analysis of the cost per mile of the different items in my estimate, compared with those of the 2nd division of the Ceylon Railway, shews the chief cause of excess in each case.

I regret to state that Mr. Foot, almost immediately after his arrival at Gampola, was attacked by fever, and is still unable to return to his duties.

I have, &c.,
GUILFORD L. MOLESWORTH,
Director-General.

The Hon'ble the COLONIAL SECRETARY,
Colombo.

ROUGH Analysis to shew the Causes of Excess in Cost of the Gampola Line beyond that of the Second Division.

Character of Work.	Cost in Second Division per Mile. £	Cost on Gampola Line per Mile. £	Excess per Mile. £	Chief Cause of Excess.
Earthworks . .	1,580	7,490	5,910	Excessive high flood level.
Bridges, Culverts, and Walls	1,400	4,190	2,790	Do. do.
Stations . . .	800	2,151	1,351	Short mileage and terminal station.
Miscellaneous . .	450	766	316	Wire fencing.
Permanent Way . .	3,000	3,627	627	Increased cost of permanent way materials.
Sidings . . .	140	1,176	1,036	Terminal station spread over short mileage.
Contingencies . .	650	1,942	1,292	Owing to the above causes
	8,020	21,342	13,322	
Land . . .	200	1,677	1,477	Expensive terminal land spread over short mileage.
Administration . .	1,000	1,000	—	Unaltered.
Rolling Stock . .	2,000	4,130	2,129	Small mileage.
Telegraph and Contingencies	420	935	515	Owing to the above causes.
	3,620	7,742	4,122	
Total, per Mile—	11,640	29,084	17,444	

GUILFORD L. MOLESWORTH,
Director-General.

Enclosure No. 7 in No. 4.

Enclosure No. 7 in No. 4.

The DIRECTOR-GENERAL, Ceylon Railway, to the Hon'ble the COLONIAL SECRETARY.

No. 345.

Ceylon Railway,
Colombo, 16th November, 1866.

The Director-General of the Ceylon Railway to the Hon'ble the Colonial Secretary.

SIR,

HAVING now surveyed the alternative routes for the Gampola Railway, and carefully reconsidered the whole question, in accordance with the instructions contained in your letter of 24th September, 1866, I have now the honor to lay before you the result of my investigations.

2. With the view of ascertaining whether any material saving could be effected by adopting a route through the valley traversed by the Gampola and Kandy road, I directed sections to be taken through the valley, and surveyed two routes to connect it with Gampola. The result of these surveys confirms my preference for the route originally selected by me.

3. The route adjoining the road avoids only the more easy portions of the original route, whilst the more difficult parts are common to both routes, and heavy work is necessitated both in entering and leaving the valley. The utmost saving to be effected by the valley route is about £10,000 or £12,000, and this at the expense of an inconvenient junction with the main line, and several long gradients of 1 in 75 and 1 in 80, instead of the ruling gradient of 1 in 200 on the original route. The saving will not, in my opinion, justify the adoption of so inferior a line.

4. Failing in the endeavour to find a less expensive route than that originally selected, my next aim has been to ascertain how the existing route could be made less costly.

5. In consideration of the fact that the excessive flood has not occurred since the year 1837, that since that time the country has to a great extent been cleared of jungle, and that the outlet of the Mahavilla Ganga at Gatumbé has been widened, so as to offer less obstruction to the flood water than formerly, I have adopted the suggestion contained in your letter, and reduced the level of the Railway through the districts liable to flood. This alteration not only enables me to make a large reduction in the earthwork, but also, by adopting a different system of drainage, to dispense with several costly viaducts. I have further been enabled to make a large reduction by the selection of a new site for the Gampola terminus, near the 12th mile-post.

6. The new site is not in so good or convenient a position as that originally proposed by me near the Suspension Bridge, but it will be only about half a mile from the Gampola Post Office and in a very fair situation. The change of site saves very heavy works, and avoids the necessity for taking up valuable land at Gampola for terminal purposes.

7. For the sake of a fair comparison, I have also made some reductions in stations, sidings, and rolling stock, by taking off some expenditure on those items, which, although it would be unnecessary if the Gampola Railway were not made, may fairly be considered an expenditure on behalf of the main line, and would be repaid by the additional traffic thrown on the main line by means of the Gampola Railway.

8. My estimate of the Railway, revised as above-mentioned, amounts to £139,750.

9. In reconsidering the question of revenue, I have the honor to remark, that the rates on which I based the traffic return are the same as those prevailing on the main line. If, however, the Government will, in consideration of the cost of the line, sanction higher rates on the Gampola Railway than those prevailing on the main line, but yet, rates sufficiently low to prevent competition by the road, the receipts will yield a fair return upon the expenditure.

10. The traffic receipts, charging an average of *5s.* per ton between Gampola and Péradeniya, and *1s. 6d.* for passengers, will amount to £11,750. The working expenses I estimate at £4,350; leaving a revenue of £7,450 per annum—or nearly 5½ per cent. on an outlay of £139,750.

11. I would further suggest that my quantities should, as before, be submitted to the Civil Engineer and Commissioner of Roads, with the view of ascertaining whether any saving can be effected by the execution of the works by means of his Department.

12. I have invited Mr. Faviell to view the plans and sections of my altered trace, with the view of tendering for the construction of the line.

I have, &c.,

GUILFORD L. MOLESWORTH,
Director-General.

The Hon'ble
The COLONIAL SECRETARY,
Colombo.

RAILWAY EXTENSION.

CORRESPONDENCE.

Enclosure No. 8 in No. 4.
The Hon'ble the Colonial Secretary to the Director-General, Ceylon Railway.

Enclosure No. 8 in No. 4.

The Hon'ble the COLONIAL SECRETARY to the DIRECTOR-GENERAL, Ceylon Railway.

Colombo, 22nd November, 1866.

SIR,

IN reply to your letter No. 345 of the 16th instant, I am directed to request that you will send in your revised estimate, shewing in detail quantities and prices, so that the Civil Engineer may be in a position to consider whether, if the work were executed by his Department, any saving could be effected.

I have, &c.,
(Signed) ALLANSON BAILEY.

The DIRECTOR-GENERAL,
Ceylon Railway.

Enclosure No. 9 in No. 4.
The Director-General of the Ceylon Railway to the Hon'ble the Colonial Secretary.

Enclosure No. 9 in No. 4.

The DIRECTOR-GENERAL, Ceylon Railway, to the Hon'ble the COLONIAL SECRETARY.

No. 368.

Ceylon Railway,
Colombo, 1st December, 1866.

SIR,

I HAVE the honor to forward to you a revised estimate for the Gampola branch line of Railway, shewing the detail quantities and prices, as called for by your letter of the 22nd ultimo.

I have, &c.,
GUILFORD L. MOLESWORTH,
Director-General.

The Hon'ble
The COLONIAL SECRETARY,
Colombo.

CEYLON RAILWAY.

Revised Estimate.—Gampola Branch Line.

Earthwork.

Quantity.						Rate.	Amount £	s.	d.
57,637	C. yds.	—	Rock cutting	—	—	5s. —	14,409	5	0
93,910	do.	—	Ordinary cutting	—	—	1s. —	4,695	10	0
210,836	do.	—	Embankment	—	—	1s. —	10,541	16	0
16,000	do.	—	Clearing and levelling at Station		—	1s. 6d.	1,200	0	0
		—	Subsidence	—	—				
		—	Sodding	—	—		1,153	9	1
		—	Side Drains	—	—				
							£32,000	0	0

Bridges and Culverts.

225	Lineal yds.	—	2 feet Culvert	—	—		675	0	0
30	No.	—	Faces to do.	—	—				
259	Lineal yds.	—	3 feet Culvert	—	—		1295	0	0
28	No.	—	Faces to do.	—	—				
200	Lineal feet	—	Cast iron socket pipe, 30″ diameter, ¾″ thick, with masonry ends	—	—		500	0	0
470	do.	—	Do. 60″ 1″				1,645	0	0
		—	with masonry ends		—				
5	No.	—	Rail Girder openings	—	—	£50	250	0	0
7	,,	—	Bridge, 10 feet span	—	—	£350	2,450	0	0
1	,,	—	Do. 25 do.	—	—		700	0	0
1	,,	—	Viaduct over Nanoo Oya	—	—		3,300	0	0
1	,,	—	Do. ,, Gele Oya	—	—		2,450	0	0
1	,,	—	Do. ,, 4 miles, 50 chains		—		1,985	0	0
							£15,250	0	0

Retaining Walls.

165	C. yds.	—	At 1 mile, 75 chains	—	—	30s.	1,500	0	0
835	do.	—	,, 4 ,, 50 ,,	—	—				
							£1,500	0	0

Quantity.	*Stations.*	Rate.	Amount. £	s.	d.
	Station Master's House and Godowns —		550	0	0
	Carriage Running Shed and Booking Office —		1,850	0	0
	Gate-keeper's Hut and Gates— —				
	Urinal — — —		350	0	0
	Pointsmen's Hut — —				
1,100 Supfcl. yards—	Metalling, 8" thick — —		800	0	0
	Drainage — — —		200	0	0
17 Sets* —	Points and Chilled Crossings —		650	0	0
	1 Turntable, 45 feet diameter — —		800	0	0
	1 Traverser with 50 feet of road —		550	0	0
	1 Turntable, 15 feet —				
	1 Pillar Tank — — —		350	0	0
	1 Tank with Mains and Well — —		750	0	0
	1 Pumping Engine-house — —		350	0	0
	1 Double Goods Shed and Office —		2,550	0	0
	1 Weighing Machine and House —		350	0	0
	1 Carriage Dock — — —		100	0	0
	1 Engine Shed and Locomotive Office and Store		1,600	0	0
	1 Ticket Platform — —		250	0	0
	Fuel Stage and Shed — —		600	0	0
	10 ton Standard Crane — —		500	0	0
370 Lineal yards —	Walling — — —		350	0	0
	Sundries — — —		250	0	0
			£13,750	0	0
	* One of these will be a 3 throw with 3 crossings.				
	Miscellaneous.				
	Upkeep of Roads — —		100	0	0
	Clearing Jungle — —		200	0	0
	Extra provision for Irrigation —		400	0	0
	Diversion of Roads and Streams —		200	0	0
	Signals (2 Distant and 1 Station) —		200	0	0
	Footpath Crossings — —		50	0	0
	Medical and Police — —		460	0	0
14½ Miles of —	Fencing, 4 Strand Galvanized Wire —	£220	3,190	0	0
			£4,800	0	0
7 miles & 20 chains —	Permanent Way — —				
1 „ 60 „ —	Of Sidings — —	£3,350	30,150	0	0
	Contingencies — —		9,750	0	0
			£107,200	0	0
	Administration — —		7,000	0	0
	Land, 50 acres at £20 —	1,000			
	50 do. 40 —	2,000			
	12 do. 80 —	960			
	12 do. 100 —	1,200			
			5,160	0	0
	Rolling Stock and Machinery— —		17,000	0	0
	Telegraph — —		400	0	0
	Contingencies — —		2,990	0	0
			£32,550	0	0

	Amount. £	s.	d.
Earthworks	32,000	0	0
Bridges, Culverts, &c.	15,250	0	0
Retaining Walls	1,500	0	0
Stations	13,750	0	0
Miscellaneous	4,800	0	0
Permanent Way and Sidings	30,150	0	0
Contingencies	9,750	0	0
Administration and Engineering	7,000	0	0
Land	5,160	0	0
Rolling Stock and Machinery	17,000	0	0
Telegraph	400	0	0
Contingencies	2,990	0	0
Total.....	£139,750	0	0

GUILFORD L. MOLESWORTH,
Director-General.

RAILWAY EXTENSION.

CORRESPONDENCE.

Enclosure No. 10 in No. 4.
The Hon'ble the Colonial Secretary to the Civil Engineer and Commissioner of Roads.

Enclosure No. 10 in No. 4.

The Hon'ble the COLONIAL SECRETARY to the CIVIL ENGINEER AND COMMISSIONER OF ROADS.

No. 1,390.

Colonial Secretary's Office,
Colombo, 11th December, 1868.

SIR,

ADVERTING to your letter No. 902 of the 12th September last, I am directed to forward to you the accompanying revised estimate for the Gampola branch line of Railway (shewing in detail quantities and prices) received from the Director-General, in order that you may consider whether, if the work were handed over to the Public Works' Department, the estimate could be still further reduced.

I have, &c.,
(Signed) JAMES SWAN.

The CIVIL ENGINEER AND
COMMISSIONER OF ROADS.

Enclosure No. 11 in No. 4
The Civil Engineer and Commissioner of Roads to the Hon'ble the Colonial Secretary.

Enclosure No. 11 in No. 4.

The CIVIL ENGINEER AND COMMISSIONER OF ROADS to the Hon'ble the COLONIAL SECRETARY.

No. 1,283.

Commr. of Roads and Civil Engr.'s Office,
Colombo, 28th December, 1869.

SIR,

IN reply to your letter No. 1,390 of the 11th instant, I have the honor to forward an estimate, based upon the quantities furnished by the Director-General of Railways, for the branch line to Gampola, amounting to £112,601, being a reduction upon that officer's estimate of £27,149.

I have, &c.,
T. SKINNER.

The Hon'ble
The COLONIAL SECRETARY.

Earthwork.

Quantity.				£	s.	d.
57,637	Cubic yards	.....	Rock Cutting @ 2s. 6d.	7,204	12	6
93,910	do.	.....	Ordinary cutting @ 9d.	3,521	12	6
210,836	do.	.....	Embankment @ 10d.	8,784	16	8
16,000	do.	.....	Clearing and levelling at Station @ 1s. ...	800	0	0
			Subsidence, Sodding, Side Drains	1,153	9	0
				£21,464	10	8

Bridges and Culverts.

225	Lineal yards	.....	2 feet Culvert	
30	do.	.....	Faces to do.	
259	do.	.....	3 feet Culvert	
28	do.	.....	Faces to do.	
200	Lineal feet	.....	Cast Iron Socket pipe, 30″ diameter, ¾″ thick, with masonry ends	
470	do.	.....	Do. do. 60″ do. 1″ with masonry ends	£8,850 0 0
5	No.	.....	Rail Girder Openings	
7	do.	.....	Bridge, 10 feet span	
1	do.	.....	Do. 25 do.	
1	do.	.....	Viaduct over Nanoo Oya	
1	do.	.....	Do. over Gele Oya	
1	do.	.....	Do. 4 miles 50 chains	

Retaining Walls.

165	Cubic yards	.....	at 1 mile 75 chains @ 15s.	£750 0 0
835	do.	.....	„ 4 „ 50 „	
			Stations	£12,000 0 0

Miscellaneous.

			£	s.	d.
		Upkeep of Roads	100	0	0
		Clearing Jungle	100	0	0
		Extra provision for Irrigation	300	0	0
		Diversion of Roads and Streams	150	0	0
		Signals (2 distant and 1 Station)	200	0	0
		Foot-path crossing	50	0	0
		Medical and Police	—		
14½ Miles	—	Wire Fencing	3,190	0	0
			4,090	0	0

Miles.	Chains.					
7	20	—	Permanent Way }	30,150	0	0
1	60	—	Sidings }			
			Administration	2,500	0	0
			Land	5,160	0	0
			Rolling Stock and Machinery	17,000	0	0
			Telegraph	400	0	0
				25,060	0	0

Earthwork	£21,464	10	8
Bridges and Culverts	8,850	0	0
Retaining Walls	750	0	0
Stations	12,000	0	0
Miscellaneous	4,090	0	0
Permanent Way	30,150	0	0
Administration, Land, Rolling Stock, &c.	25,060	0	0
	102,364	10	8
Casualties	10,236	9	4
Total—	£112,601	0	0

T. Skinner.

Enclosure No. 12 in No. 4.

The Hon'ble the Colonial Secretary to the Government Agent, Kandy.

No. 374. Colonial Secretary's Office,
Colombo, 24th September, 1866.

Sir,

I am directed by the Governor and the Executive Council to request that you will submit an estimate of the probable receipts from Traffic on the proposed line of Railway to Gampola.

In a Report received from the Director-General of the Ceylon Railway, he has estimated the return from traffic at £7,650 per annum.

In preparing your estimate you will confer with that officer as to the basis on which his calculation has been made.

I have, &c.,
(Signed) James Swan.

The Government Agent,
Kandy.

Enclosure No. 13 in No. 4.

The Government Agent, Kandy, to the Hon'ble the Colonial Secretary.

Government Agent's Office,
Kandy, 17th December, 1866.

Sir,

With reference to your letter of the 24th September last, I have the honor to forward my estimate of the probable receipts from Traffic on the proposed line of Railway to Gampola. I regret the delay which has taken place in submitting this statement, but in order to secure correct information it has been necessary to make several references to Agents and others interested in Coffee plantations.

I have, &c.,
F. B. Templer,
Agent.

The Hon'ble
The Colonial Secretary,
Colombo.

RAILWAY EXTENSION.

Correspondence.

Enclosure No. 13 in No. 4.
The Government Agent, Kandy, to the Hon'ble the Colonial Secretary.

Estimate of the probable Receipts from Traffic on the proposed Line of Railway to Gampola.

		£	s.	d.
Coffee.	Tons 10,000			
Rice.—Allowing one cooly for 5 cwts. of Coffee produced, which multiplied by 10 as the ordinary consumption of each man per annum, would give 400,000 bushels of rice for 40,000 Coolies, tons .. .	10,000			
Sundries.—Manure, Building Materials, &c.	3,000			
Total Tonnage—	23,000			
at 3*s.* a ton . .		3,450	0	0
Passengers.—Between Gampola and Kandy, say 80 per day, averaging 1*s.* 6*d.* each, or £6 per day for 365		2,190	0	0
Through Passengers, 160 per day, averaging 1*s.* each, or £8 per day for 365 days		2,920	0	0
Carriages, Horses, Sundries		472	10	0
		£—9,032	10	0

F. B. Templer,
Agent.

No. 5.
His Grace the Duke of Buckingham and Chandos to Governor Sir H. Robinson.

No. 5.

His Grace the Duke of Buckingham and Chandos to Governor Sir Hercules Robinson.

Ceylon.
No. 40.

Downing Street,
2nd May, 1867.

Sir,

Colonial Office to Agents, 5th March, 1867.
Agents to Colonial Office, 3rd April, 1867, and enclosures.

I have to acknowledge your Despatch No. 2 of the 9th January last, submitting for approval a project for the construction of a branch of the Ceylon Railway to Gampola. I annex for your information copies of correspondence with the Crown Agents on the subject of your Despatch.

2. It appears that no plans or sections or other drawings of the proposed works have been received from your Government, either by this Department, the Crown Agents, or the Consulting Engineer. Nor are the estimates of cost, on which you rely, supported by any tender from a Contractor. It appears to me that the most desirable course to pursue, with regard to any Railways to be constructed for your Government, whether branches or main lines, will be, that plans and sections should be sent home in all cases, and tenders obtained for the works specified. I do not find any sufficient reason in your despatch for dispensing with these steps, whether the works are to be executed as a contract, or by agency of Government, in detail. These preliminaries must therefore be complied with, before Her Majesty's Government can come to any decision on the present project.

I have, &c.,
BUCKINGHAM AND CHANDOS.

Sir H. G. R. Robinson,
&c., &c., &c.

Enclosure No. 1 in No. 5.
Sir F. Rogers to the Crown Agents for the Colonies.

Enclosure No. 1 in No. 5.

Sir F. Rogers to the Crown Agents.

Downing Street,
5th March, 1867.

Gentlemen,

Secretary of State to Governor, No. 190, 19th August, 1865.
Governor to Secretary of State, No. 38, 27th May, 1865.
Governor to Secretary of State, No. 2, 9th January, 1867, and enclosures.

I am directed by the Earl of Carnarvon to annex, for your information, copies of correspondence with the Governor of Ceylon on the subject of a project for constructing a branch of the Ceylon Railway to Gampola, and I am directed to request you to report, after consulting Mr. Gregory, C. E., (whose Report you will submit with your own), on the proposals now made by the Governor in his Despatch No. 2, dated the 9th January.

I am, &c.,
(Signed) F. Rogers.

The Crown Agents
for the Colonies.

Enclosure No. 2 in No. 5.

Mr. JULYAN to Sir F. ROGERS.

Enclosure No. 2 in No. 5. Mr. Julyan to Sir F. Rogers.

Offices of the Crown Agents,
Spring Gardens, London, 3rd April, 1867.

SIR,

I HAVE the honor to acknowledge the receipt of your letter of the 5th ultimo, relative to a projected branch of the Ceylon Railway from Péradeniya to Gampola, and I now beg to enclose, for the information of the Duke of Buckingham and Chandos, a copy of the correspondence which has passed between the Crown Agents for the Colonies and the Consulting Engineer on the subject.

2. So far as the information sent to this country will justify the formation of any definite opinion in this matter, Mr. Gregory concurs generally in the views and proposals of the Director-General of the Ceylon Railway.

3. In his review of the estimates he merely suggests that certain reductions might possibly be made in the amount of Station accommodation and in the length of sidings; and considers that £130,000, would be a safe sum to put down for the completion of the work.

4. Acquiescing also in the opinion expressed in the Colony, that it would be advisable to apply the contract system to this short branch, on the same principle as was observed on the main line, he at the same time recommends that the Station work should be so embodied in the contract as to remove all chance of misunderstanding hereafter between the Contractor and the Government.

5. In these recommendations the Crown Agents fully concur, feeling assured that as the Contract system is now in operation on the spot, and the Contractor is already provided with the men and materials necessary to the work, it will (irrespective of the certainty of what is to be paid) be found cheaper in the end to carry out the undertaking on reasonable terms through him, than it would be to do it through the Works' Department, unless the strength of that Department is at present in excess of the ordinary demands made upon it.

6. With regard to the proposed specification of the Station work in any new contract that may be entered into, it is only necessary to say that its original and necessary omission from the main line contract, and again, more especially, the non-adoption of an arrangement which would have admitted of the payment of a fixed sum based on specifications, for the Station work, which it has been found necessary to carry out as an extra to that contract, have been fruitful sources of reference and misunderstanding, which it would be well in future to avoid.

7. If the maintenance of the branch be embraced in the contract, it would be advisable that it should be for a period terminating on the same day as that for the main line, in order that the Government may then be free to adopt one uniform system throughout, such as may appear to them best calculated to serve the interests of the Colony.

I have, &c.,
(Signed) P. G. JULYAN.

Sir F. ROGERS, Bart.,
&c., &c., &c.

Sub-Enclosure No. 1, in Enclosure No. 2 in No. 5.

Mr. JULYAN to Mr. GREGORY.

Sub-Enclosure No. 1, in Enclosure No. 2 in No. 5. Mr. Julyan to Mr. Gregory.

Ceylon Railway.

Immediate.

Offices of the Crown Agents for the Colonies,
7th March, 1867.

SIR,

I ENCLOSE for your information copy of a correspondence which has taken place between the Secretary of State for the Colonies and the Governor of Ceylon, relative to a projected branch of the Ceylon Railway from Péradeniya to Gampola.

The Crown Agents for the Colonies request that you will be good enough to furnish them with an early report of your opinion on the project generally, so far as the information in your possession will enable you to do so.

No plans, sections, or drawings of any kind appear to have been sent to this country.

Although the gauge of the proposed branch does not appear to have been stated in the present reports and estimates of the Director-General, yet it may, I think, be taken for granted that the Government contemplate carrying out in this respect the recommendations of a committee, of which Mr. Molesworth was a member, contained in their report of the 1st May, 1865, a copy of which is enclosed.

The estimate for permanent way and rolling stock tends strongly to confirm this belief also.

RAILWAY EXTENSION.

CORRESPONDENCE.

Sub-Enclosure No. 1, in Enclosure No. 2 in No. 5. Mr. Julyan to Mr. Gregory.

The length of the line is stated by the Director-General to be 27 miles, the estimated cost per mile, in round numbers, £17,500. The estimated earnings per mile £1,561 per annum, and the working expenses and maintenance £561, being only 37 per cent. on the gross earnings.

More favourable pecuniary results, it is presumed, could only be looked for by adopting a narrower gauge, and lighter rolling stock, on this little branch, than is in use on the main line, but of course this could only be done by sacrificing that uniformity which it may be convenient and desirable to maintain on all the Government Railways.

Looking, however, to the very limited extent of the traffic, and to the economy in the number of vehicles that uniformity of gauge ought to produce, it may be well to consider whether so large a sum as £17,000 should at the commencement be spent in rolling stock.

I am, &c.

C. H. GREGORY, Esq., C.E., Delahay Street, Westminster.

(Signed) P. G. JULYAN.

Sub-Enclosure No. 2, in Enclosure No. 2 in No. 5. Mr Gregory to the Crown Agents.

Sub-Enclosure No. 2, in Enclosure No. 2 in No. 5.

Mr. GREGORY to the CROWN AGENTS.

Ceylon Railway.

1, Delahay Street,
Westminster, 19th March, 1867.

GENTLEMEN,

1. IN accordance with the instructions conveyed in your letter of the 7th instant, I have carefully considered the papers transmitted therewith, referring to the projected Branch Railway from Pérádeniya to Gampola, and I now have the honor to submit the opinions I have formed on the subject, which, however, I offer under considerable reservations, as I have neither plans nor sections, nor other technical details, which, if I possessed them, would enable me to arrive at more definite conclusions.

2. Of the selection of the route I can only speak in very general terms. As a rule, an Engineer would certainly be right in laying out a line at such levels, and under such conditions of waterway, &c., as to provide against a recurrence of floods equal to the highest on record.

3. At the same time, having reference to the remote date of the flood (1837), which influenced the Director-General in originally fixing the conditions of construction which formed the basis of his first estimate, and to the circumstances alluded to in his letter to the Hon'ble the Colonial Secretary of November 6th, 1866, which may probably have diminished the tendency to floods in the district in question, there would appear to be reasons for supposing that the conditions now proposed to be adopted may be found safe.

4. I would however suggest, that in the event of the works being carried out, it may be desirable to see whether, by some special provision in draining of low lands in case of need, and further improving the capacity of discharge of the Mahavilla Ganga, and other subsidiary measures, a provision may be made for more rapidly carrying off flood waters before they attain a serious height.

5. The explanations given by the Director-General shew that alternative routes have been practically studied, and bearing in mind the great improvements made under his direction in the surveys of the main line from Colombo to Kandy, I consider that the Government may safely conclude that the line selected by him is the best which the country affords.

6. From examination of the two estimates submitted by the Director-General and the Civil Engineer and Commissioner of Roads, respectively, (the one amounting to £139,750, and the other to £112,601), I find the main difference in the two estimates to be in the items of Earthwork, Bridges, Culverts, and Retaining Walls, Stations and Administration. I presume these differences may to a great extent be accounted for by the Director-General having adopted prices based on the experience of the Railway, and which have been affected by the great demand for labour caused by the construction of the Railway; while the prices of work in the Civil Engineer's Department have been more equable from the demand on the force employed by that Department having been comparatively regular, and their pay not subject to similar fluctuations.

7. It is difficult to say how far, or how soon increase may arise in the cost of work executed by the Civil Engineer's Department, and with this uncertainty in view, and the probability that the prices might be affected by throwing on that Department the construction of the Gampola Branch, I apprehend that it would be found that the Civil Engineer's estimate is on the whole decidedly too low,—indeed in some items the prices are below those of Mr. Faviell's estimate for the main line.

8. On the other hand, the Director-General has evidently allowed for the rise of prices, which has occurred on the Railway works, which it is possible, may be subject to a reduction when the great demand for labour has disappeared, and if this should be the case, some diminution would arise in most of the items of his estimate.

9. I cannot but think that reductions might be made in the amount of station accommodation, which appears to be contemplated by the Director-General, and in the length of sidings, and also in the amount provided for rolling stock, assuming that the branch is to be worked as part of the same system with the main line.

10. On the whole, I think it probable that the line may be completed, with adequate station accommodation, sidings, and rolling stock, for a sum materially less than the estimate of the Director-General, but I am not prepared to say that I think the reduction would bring it to so low a sum as that contemplated by His Excellency the Governor in his Despatch to the Secretary of State, dated January 9th, 1867. I think, however, that £130,000 would be a safe estimate.

11. In reference to the probable earnings of the branch, I am unable to give any opinion. At the same time, I should suppose the Government Agent at Kandy would be in a position to advise the Governor safely on such a question; and if the increased rates, suggested in the Director-General's letter to the Colonial Secretary, dated November 16th, 1866, are sufficiently low to prevent competition, it would seem that they might with propriety be applied to the Government Agent's quantities, as contemplated in His Excellency's Despatch above alluded to, in which the estimated traffic receipts were brought up to £12,500 per annum.

12. I am not in possession of the elements on which the traffic estimate of the Government Agent is based, but if in any particulars it assumes only the existing amount of transport, such items would no doubt be subject to considerable increase by the development due to the opening and working of the Railway.

13. The documents sent give no details which would enable me to form a definite opinion on the cost of working the branch. This was estimated at £4,800 per annum in the Director-General's letter to the Colonial Secretary of August 28th, 1866, but reduced to £4,350 per annum in his letter of November 16th, 1866, owing, as I assume, to the alterations which had been made in the line. Seeing, however, that the quantities of traffic estimated by the Government Agent at Kandy exceed those estimated by the Director-General, the money difference at the same rates, amounting to 18 per cent., it would appear to me that some addition would have to be made to the working expenses. If the arbitrary rate of 10 per cent. were added to the Director-General's last estimate, to meet the additional cost, it would bring the working expenses up to £4,785 per annum.

14. Deducting this amount of £4,785 for working expenses from the estimate of £12,500 for receipts, would leave a net amount of £7,715 per annum; and, if this profit were realized, it would pay within a small fraction of 6 per cent. on a capital of £130,000.

15. In reference to the question raised in the correspondence, whether, in the event of the branch being constructed, the works should be let by contract, or executed by the Government, I concur in the recommendation of the Director-General, that the Contract system should be adopted if an acceptable tender should be made; I submit, however, that the rolling stock and machinery may, with advantage, be ordered direct by the Government from the manufacturers, which would save the Contractor's profit on the stock, and enable the Government to have more complete control over the character of such work.

16. It is perhaps hardly necessary that I should call attention to the advantage, if possible, of specifying the station work, and making it part of the definite contract. This course was not practicable in the contract for the main line, as when the contract was let, the position and design of the stations had not been settled; but, if practicable, it would save uncertainty in cost, and materially diminish the risk of differences.

17. Your letter has directed my attention to the enquiry, whether advantage might be anticipated by the adoption of a narrower gauge and lighter rolling stock for the Gampola branch. You do not, I suppose, desire me to deal with such a question generally and exhaustively; but I may state that, having on several occasions had to consider the question generally, I have come to the conclusion that the advantages of such a system are frequently exaggerated.

18. As regards works of construction, assuming that the same direction of line is adopted, the saving would amount to little more than a strip of masonry and earthwork, and ballast, of the width of the difference of the gauge, taken out of the middle of the line for its whole length; the wing walls of bridges being not at all, and the piers and abutments only very little, affected, while the great mass of earthwork in the slopes would remain the same, and the fencing, drainage, stations, and buildings would be undiminished. The money value of the reductions in construction amounts generally to a small per centage on the whole cost. A light permanent way involves more rapid deterioration, and light and small rolling stock does not necessarily involve saving in cost, unless the traffic is, and remains, very small.

19. The conditions under which an exceptionally narrow gauge is desirable, are, I think, exceptional. The most favorable condition for its use is, when country is very broken and precipitious, in which case a narrower gauge, which admits of the introduction of sharper curves, enables a line to be laid out along the sides of hills near the surface of the ground, and twisting in and out the lateral valleys or gorges. From the curves and gradients which are named in the papers as attained on the Gampola branch, I do not suppose the country traversed to be of this nature.

20. Again, the short length of the branch would make the separation in working of stock more expensive than it might be in other circumstances, and would require a

RAILWAY EXTENSION.
CORRESPONDENCE.

Sub-Enclosure No. 2, in Enclosure No. 2 in No. 5.
Mr Gregory to the Crown Agents.

proportionally larger amount of spare stock than if the rolling stock for the branch were of the same description as the main line.

21. Finally, whatever arrangements might be made for avoiding breaking bulk of goods by filling them into boxes to be transferred from narrow gauge vehicles to wide gauge vehicles, and *vice versa*, while it saved some cost in transshipment, would involve expensive machinery and some amount of labour and loss of time, and stock standing idle.

22. I believe that all these causes combined would, in the case of the Gampola branch, probably extinguish a considerable amount of the apparent savings of a narrower gauge, and leave the system with the permanent blot of a break of gauge, if such narrower gauge were adopted. These considerations lead me to conclude, that the Government of Ceylon has been properly advised to adopt the gauge of the main line on the Gampola branch.

I have, &c.,
(Signed) CHARLES HUTTON GREGORY,
Consulting Engineer.

The CROWN AGENTS for the Colonies,
Spring Gardens.

No. 6.
Governor Sir H. Robinson to His Grace the Duke of Buckingham and Chandos.

No. 6.

Governor Sir H. ROBINSON to His Grace the DUKE OF BUCKINGHAM AND CHANDOS.

No. 193.
Miscellaneous.

The Pavilion, Kandy,
Ceylon, August 24th, 1867.

MY LORD DUKE,

I HAVE the honor to acknowledge Your Grace's Despatch No. 40 of the 2nd May last, on the subject of the proposal for the construction of a branch line of Railway from Péradeniya to Gampola, and desiring to be furnished with plans and sections of the proposed works, to enable Her Majesty's Government to come to a decision on the project.

No. 183, August 9.

2. In compliance with these instructions, I now forward copy of a letter from the Director-General of the Railway, submitting the required plans and sections.

To Col. Secy. from Mr. Molesworth, January 11, 1867, No. 13, and enclosure.
From Col. Secy. to Mr. Molesworth, January 21, 1867.
Mr. Faviell, March 2, 1867, (enclosure of letter from Director-General of 2nd March, 1867, No. 66), and March 5, 1867 (enclosure of letter from Director-General, No. 74, of March 9, 1867.
Mr. McBean, 22nd April, 1867 (enclosure of letter from Director-General, May, 11, 1867.)

3. I forward also copies of the tenders for the work, received from Mr. Faviell, the Contractor for the Railway from Colombo to Kandy, and Mr. McBean, one of the Government Railway Engineers.

4. I further enclose estimates for the work, prepared by Mr. Molesworth, Director-General, and by Major Skinner, late Civil Engineer and Commissioner of Roads.

5. The following are the results of each of these proposals.

Mr. Faviell's tender, which does not include stations, administration, and other contingencies, amounts to ..... £106,870.
Mr. McBean's do. ..... 100,136.
Mr. Molesworth's estimate, exclusive of the above items ... 92,790.
Major Skinner's do. do. ... 65,641.

6. Adding to the above figures the sum of £46,960* for stations, contingencies, &c., as estimated by the Director-General, the comparative amounts for which the work can be completed, according to these different proposals, will be as follows:—

According to Mr. Faviell's tender ..... £153,830.
Do. Mr. McBean's do. ..... 147,096.
Do. Mr. Molesworth's estimate ..... 139,750.
Do. Major Skinner's do. ..... 112,601.

Enclosure of Mr. Molesworth's letter No. 368 of Dec. 1, 1866; and enclosure of Civil Engineer's letter No 1283, Dec. 28, 1866.

7. It will thus be seen that, according to Mr. Faviell's tender, the amount exceeds those of the others as follows:—

Mr. McBean's by ..... £6,734.
Mr. Molesworth's by ..... 14,080.
Major Skinner's by ..... 41,229.

8. Mr. McBean's tender is in excess of Mr. Molesworth's estimate by £7,346, and of Major Skinner's by £34,495.

9. Mr. Molesworth's estimate exceeds that of Major Skinner by £27,149.

10. To the letter of the Director-General is appended a copy of the contract for the construction of the Railway between Colombo and Kandy, with Mr. Molesworth's suggestions for the alterations which he considers necessary to make it applicable to the Gampola line.

11. In my Despatch No. 2 of the 9th June last, I expressed the opinion of this Government, that the extension to Gampola might be completed for £120,000. Mr. Gregory, the Consulting Engineer, in his letter to the Crown Agents of the 19th March last, considers this a little low, but thinks that £130,000, would be a safe estimate. I see no reason to doubt the possibility of the undertaking being accomplished by the Public Works Department for a sum, at all events, not exceeding that named by Mr. Gregory; and I am therefore not prepared to recommend the acceptance of either Mr. Faviell's or Mr. McBean's tenders, which would, as I have shewn, involve an expenditure of from

* Stations, exclusive of Points and Crossings...£13,100
Administration and Engineering 7,000
Land 5,160
Rolling Stock and Machinery 17,000
Telegraph 400
Contingencies on the four last items 2,990
Proportion of Contingencies on Stations 1,310
£46,960

RAILWAY EXTENSION.

Commencement.

No. 6.
Governor Sir H. Robinson to His Grace the Duke of Buckingham and Chandos.

£147,000 to £153,000. It is evident that the traffic on the line between Colombo to Kandy, now just completed, will exceed all the anticipations which have been formed in respect to it, and that the early extension to Gampola is greatly to be desired. I trust therefore, Your Grace will sanction my submitting the proposal to the Legislative Council, and that I may receive your decision in time to enable me to do so during the approaching Session, as otherwise the commencement of the work will be delayed to the year 1869,—and its completion until 1870 or 1871.

12. The funds might be provided, as I have already suggested, one-half by the issue of debentures, and the other half from surplus balances and general revenue.

13. There could not be a more favorable moment for the work being undertaken by the Public Works Deparment than the present. A number of roads now in progress will be completed by the end of the current year. This will set free a large force of Pioneers, which might with advantage be employed on the Railway, and, besides, the local labour market, in consequence of the distress in India, is at present unusually well supplied.

His Grace
The DUKE of BUCKINGHAM AND CHANDOS.

I have, &c.,
H. G. R. ROBINSON.

Enclosure No. 1 in No. 6.

The DIRECTOR-GENERAL, Ceylon Railway, to the Hon'ble the COLONIAL SECRETARY.

No. 183.

Ceylon Railway,
Colombo, 9th August, 1867.

Enclosure No. 1 in No. 6.
The Director-General of the Ceylon Railway to the Hon'ble the Colonial Secretary.

SIR,

IN reply to your letter No. 105 of the 7th June, 1867, respecting the Despatch of the Right Hon'ble the Secretary of State for the Colonies, on the subject of the Gampola Railway, I have the honor to forward plans and sections described in the accompanying list, and numbered from 1 to 26 inclusive.

Looking to the shortness of the line (7¼ miles), and the fact that tenders were forthcoming in the Colony, I deemed it unnecessary in the first instance to send to the Consulting Engineer plans, sections, or data, other than those necessary for a reference on general questions. I have also the honor to forward a copy of the contract for the construction of the Ceylon Railway, with my suggestions for alterations necessary to make it applicable to the Gampola line.

It was on this basis that the tenders of Messrs. Faviell and McBean were based, with the exception that the Stations did not form a portion of the contract, as it was intended to prevent a recurrence of difficulties experienced in the last contract, that they should either be executed by the Public Works Department, or be the subject of special agreement with the Contractor.

The following is a comparison of these tenders, with my estimate made by the Chief Resident Engineer:—

Mr. Faviell's tender	£106,870.
Mr. McBean's „	100,136.
Mr. Molesworth's estimate.....	92,790.

The figures are exclusive of stations, administration, land, rolling stock, machinery, and telegraph. I enclose a copy of the Chief Resident Engineer's letter on the subject.

The station accommodation is, in my opinion, the minimum that should be allowed for so important a terminal station as Gampola, and I cannot recommend any reduction in it.

I have, &c.,
(Signed) GUILFORD L. MOLESWORTH,
Director-General.

Sub-Enclosure No. 1, in Enclosure No. 1 in No. 6.

Sub-Enclosure No. 1, in Enclosure No. 1 in No. 6.

CEYLON RAILWAY.

Gampola Railway.

List of drawings accompanying letter No. 183 from the Director-General of the Ceylon Railway to the Hon'ble the Colonial Secretary, dated 9th August, 1867.

No. of Drawing.	
1.	Plan of centre line of Railway, with traverse lines and lines of cross sections.
2.	Trial section.
3 to 10.	Cross sections.
11.	Culverts and pipe-drains.
12.	3 feet open drains, 10 feet arch, and 25 feet girder bridge.
13.	Viaducts.
14.	Block plan of Gampola Station.
15.	Plan of passenger shed.
16.	Cantilevers at entrance to passenger shed.
16 *a*	Roof over passenger shed.
17.	Goods sheds and office.
18.	Weigh-house and bridge.
19.	Water tank.
20.	Porter's lodge and gates.
21.	Water closets and urinals.
22.	Fuel stage, and Carriage dock.
23.	Station Master's house.
24.	Permanent Way construction.
25.	Engine running shed.
26.	Engine turn-table.

GUILFORD L. MOLESWORTH.

RAILWAY EXTENSION.

CORRESPONDENCE.

Sub-Enclosure No. 2, in Enclosure No. 1 in No. 6.

Gampola Railway Contract.

Sub-Enclosure No. 2, in Enclosure No. 1 in No. 6. Gampola Railway Contract.

*Articles of Contract made the day of in the year of our Lord One thousand Eight hundred and Sixty between the Government of the Island of Ceylon by and both of London, Crown Agents for the Colonies for and on behalf of the said Government of the one part and of and hereinafter called the Contractor of the other part.

Whereas the said Government being desirous of constructing a Railway from Peradeniya Station to Gampola in the Island of Ceylon, and whereas surveys have been made and a general specification has been prepared on behalf of the said Government, and a copy of such specification as finally settled is given in the first schedule to these presents, and whereas the said Contractor lately offered to make and complete the Railway in accordance with the terms of the said specification, and a copy of which offer is given in the 2nd schedule hereto, and the same was accepted by the said Government, and it was agreed between them that these presents should be entered into by way of contract accordingly. And whereas it has also been agreed that the said Contractor shall secure the due performance of the said Contract by the joint and several bonds of himself and and as sureties for him, the said Contractor, in the penal sum of £2,000.

NOW THEREFORE THESE PRESENTS WITNESS that the said Contractor, so far as regards such part of this Contract, as is to be fulfilled by him or on his part, DOTH hereby for himself, his heirs, executors and administrators, COVENANT and agree with the said and and each of them, their and each of their executors, administrators and assigns, and also as a separate covenant with the said Government, their successors and assigns; and the said Crown Agents do hereby, in pursuance of the powers them in that behalf enabling on account of the said Government, contract and agree with the said Contractor, his executors, administrators and assigns, in manner following, that is to say:—

Interpretation of terms.

ARTICLE 1.—The Schedules to these presents shall be deemed part of these presents, and the expression "the Contract," therein as well as in these presents, shall mean and include the said his heirs, executors, administrators, and licensed assigns. The expression "the Railway" herein and in the schedules hereto, refers to the intended Railway mentioned in the Specification. The expression "Crown Agents," means the said parties hereto of the first part, and the survivor of them or other the persons or person for the time being authorized by Her Majesty's Secretary of State for the Colonies to act as Crown Agents for the said Colony. The expression, "the Government," means the Government for the time being of the said Island of Ceylon, and every certificate given or signed by the Colonial Secretary for the time being of such Government or person lawfully acting as such Colonial Secretary, shall be conclusive evidence of every order, decree, and appointment of the said Government; and all notices on behalf of the Government may be given by him as well as by the Crown Agents and Engineer, and every thing done in execution or pursuance of this Contract under the written authority of the Secretary of State for the Colonies in England, or of the Governor or such Colonial Secretary, or person lawfully acting as such, shall be deemed to have been done by the Government. The expression "the Consulting Engineer," means the Engineer for the time being appointed by the said Government to act as such Consulting Engineer in the matter of this Contract, who shall be appointed in the manner hereinafter in that behalf provided.

Notices, how to be served.

All notices to be given to the Contractor for the purpose of this Contract shall be in writing under the hand of the Colonial Secretary of the said Government, or person lawfully acting as such Colonial Secretary as aforesaid, or of the Crown Agents or one of them, or of the Consulting Engineer or his agent, or of the Chief Resident Engineer or his agent, and shall either be delivered to the Contractor personally, or left for him with one of his agents or foremen at the works, or with such person and at such places as he shall name and appoint in Ceylon and London, upon whom and where such notices may also be served, or failing such appointment, at some office on the said Works in Ceylon or at at the option of the Government.

Chief Resident Engineer may be appointed by the Government.

2.—The Government may from time to time appoint a Chief Resident Engineer in Ceylon to represent them there for the purposes of this Contract.

Consulting Engineer and Chief Resident Engineer may delegate powers to their assistants.

3.—The Consulting Engineer and the Chief Resident Engineer may from time to time respectively delegate to assistants to be named by them such of the powers and authorities respectively vested in them for the general purposes of this Contract, as they with the consent of the Government may think fit, and the Contractor will recognize such assistants, on written notice of their appointment, as lawfully exercising for the purposes of this Contract the powers and authorities so delegated.

4.—Every Certificate in writing of the Consulting Engineer or the Chief Resident Engineer given under his hand for any of the purposes of this Contract, shall be binding and conclusive on the Government and on the Crown Agents and Contractor, and shall be final, except where otherwise provided by these presents, and save only that either of them by any subsequent certificate given for the purposes of this Contract may make any rectification which he thinks necessary and proper of all or any of his prior Certificates. Certificates of Consulting Engineer and Chief Resident Engineer to be binding on Government.

5.—The expression "the Engineer" herein and in the schedules hereto, means and includes the Consulting Engineer for the purposes of matters and work in England, and the Chief Resident Engineer for the purposes of matters and work in Ceylon respectively. Interpretation of the term "the Engineer."

6.—The Contractor shall well and substantially and in a good, lasting and workmanlike manner, and with the best materials and workmanship, construct, execute, and complete the Railway and works mentioned in the Specification as a single line of Railway, and shall construct and lay down a single line of rail thereover, and shall construct and execute and complete such Railway and works, with all requisite excavations and embankments, tunnels, earthworks, diversions of roads, rivers, canals, streams, drains, bridges, approaches, culverts, retaining walls, brickwork, ironwork, masonry, concrete, piling, asphalte, permanent way, sidings, stations, station houses, fencing, signals and works, accessories and conveniences whatsoever, temporary or permanent, necessary or which shall by the Engineer be required for forming and constructing the said Railway and works complete, in accordance with the directions and conditions contained or referred to in the said Specification, and these presents respectively, or with the plans, instructions and Specifications from time to time hereafter to be furnished or given. And shall at his own cost provide all and every kind of labor, stone, bricks, timber, ironwork, building and other materials, wagons, barrows, and beasts of labour, planks, scaffolding, centering, temporary rails or trams, and sleepers, engines, implements, tools, and plant, respectively described or referred to, or implied in the aforesaid Specification, or which shall in the opinion of the Engineer be required for the due execution, construction or completion of all or any of the works hereby undertaken to be executed, constructed or made, and shall abide by, perform and fulfil all the requisitions, conditions, and directions in the Specification contained. Contractor to construct and complete Railway. Contractor to provide materials.

7.—All customary and proper accommodation works rendered necessary by the construction of the Railway, shall be executed by the Contractor as part of the guaranteed Contract, but this shall not be understood to require of him new or improved accommodation works, of which the necessity is not caused by interference with existing communications or accommodations. Customary accommodation works to be executed by Contractor.

8.—The Contractor shall at all times during the progress of the said works provide and employ constantly upon the said works, and also in the supervision of materials provided in Europe, such or so many competent and responsible foremen to inspect, superintend, and direct the same, as the Engineer shall from time to time require and approve, to whom application may be made and direction given in all matters touching the works hereby contracted for, and also such number of experienced and in all other respects proper and fit agents and overlookers for the efficient conduct of the works as shall in the opinion of the Engineer be adequate for the due completion of this Contract. Contractor to employ competent persons, &c.

9.—The Contractor shall pay all workmen employed by him in or about the works at periods approved by the Engineer, and in manner sanctioned by the Engineer, as in accordance with the usages of the country. Contractor to pay workmen in the manner approved by Engineer.

10.—The whole of the said Railway and works with their accessories, as contemplated or implied in the Contract and Specification, and including such modifications thereof as may be made under the Contract and Specification, shall be completed within two years from the date of this Contract. Provided always, that if the act of God, war, insurrection, rebellion, non-possession of land, or any extraordinary and unforeseen circumstances which may in the opinion of the Consulting Engineer be beyond the control of the Contractor, shall, in such Consulting Engineer's opinion, cause unavoidable delay, it shall be in his power to extend the time of completion. In the event of the whole of the works not being completed in all respects fully fit for traffic within the period abovenamed, or within such further or extended period or periods as the said Consulting Engineer shall name in writing, the Contractor shall forfeit and pay to the Government the sum of £300 for every calendar month or part of a month after the expiration of such period or periods in which the whole of the works may not be completed, such monthly sum to be paid and recovered as and for liquidated damages, and not in the way of penalty, and it is agreed that the Government shall be at liberty to deduct or set off the same from or against any monies to be paid to him under this Contract. Railway to be completed by 1st February, 1867.

11.—The Contractor shall execute all the works hereby contracted to be executed under the immediate inspection and control of the Engineer, and in such order and manner as the Engineer shall direct, and in so doing shall comply with all local acts, usages and laws. Contractor to execute Works under the control of Engineer.

12.—The Contractor shall not enter upon or occupy or use any land, whether required for the Railway and works, or for the temporary purpose thereof, without the previous sanction, in writing, of the Engineer. Contractor not to occupy land without sanction of Engineer.

13.—The Contractor shall take all necessary precautions by fencing, lighting, watching or otherwise, to protect the public from injury, and the adjoining lands from trespass, during the progress of the said works. Contractor to fence, &c.

Contractor not to interfere permanently with public or private roads, &c.

14.—The Contractor shall not, in the execution of any of the works or otherwise, injure or permanently interfere with the free use of any public or private road or footpath, further than may be indicated and allowed by the Engineer, and in constructing the said Railway and works across public roads or across any other roads or paths, and in every other case where any such injury or interference shall unavoidably or otherwise happen, the Contractor shall observe and be bound by the directions relative to the crossing of roads, streets, and highways, of any law or usage in the said Island, and will be solely answerable for every such injury, obstruction, and interference, and shall save harmless and indemnify the Government from all losses, expenses, claims, and demands on account thereof, and in carrying any materials, or otherwise passing across, over or under any road or path whether permanent or temporary, every necessary precaution shall be taken by the Contractor to avoid injuring or interfering with the use of the same, and he shall save harmless and indemnify the Government from all losses, damages, expenses, claims, and demands on account or in consequence thereof, or in consequence of any injury to the owners or occupiers of land, or other parties from the failure of any of the works herein contracted for, or from delays in the commencement or completion thereof respectively, or from trespass.

Contractor to make good damage done to private property.

15.—The Contractor shall make good any damage to the roads, whether public or private, drains, canals, bridges, culverts, dams, and watercourses, lands, buildings and properties generally arising from any cause contingent upon the execution of the said Railway and works hereby contracted for, and shall take upon himself all the liability of the Government in respect thereof.

Contractor to contribute to the maintenance of roads.

16.—The Contractor shall be bound to contribute to the upkeep of roads used by him either by tolls or such mode of contribution as may be usual in the country, or in the absence of law or usage, as may be fair and reasonable considering the use made by him of such roads.

Roads made by Contractor to become Government property.

17.—Any Roads made by the Contractor for the purpose of carrying on the works shall, if so desired by the Government, become their property without any rate or charge being made in respect thereof by the Contractor.

Contractor to make compensation to owners of property for damages done.

18.—The Contractor shall make full compensation and satisfaction as shall be legally claimable to all owners, lessees, or occupiers of land, buildings, water-courses, and property adjoining or near to the site of the works to be done under this Contract, and which shall be taken, injured, crossed, or otherwise temporarily used or occupied by the Contractor, for all loss or damage to be by such owners, lessees or occupiers, or other persons respectively sustained in or by the construction and execution of the said Railway and works, or by the neglect or omission of the Contractor, and shall indemnify the Government in respect thereof.

Contractor to pay all royalties, &c.

19.—The Contractor shall pay all royalties and other sums of money which shall be due or payable in respect of any patented articles or designs which shall be used by him in the construction of the Railway and works.

Contractor to indemnify Government against penalties and fines.

20.—The Contractor shall at all times indemnify the Government against all penalties, fines and payments whatsoever which they shall be required and compelled to pay or make by reason of the non-performance or non-observance of all or any of the engagements herein contained on the part of the Contractor; and if at any time the Government shall be called upon under any law or usage or otherwise to pay any sum or sums of money by way of penalty, fine, compensation or otherwise for or in respect of or by reason or an account of the breach, non-performance or non-observance by the Contractor of any of the covenants herein on his part contained, or on account of any misfeazance, neglect or trespass on his part, or liabilities of his incurred or arising in carrying out the said Railway works and their accessories, the Contractor shall thereupon, on demand, repay to the Government the full amount of all such penalties, fines and payment, including all costs and charges, damages, and expenses attending the settling and ascertaining and payment thereof, or of defending any action, suit or other proceeding in respect thereof; provided nevertheless that no such payment shall be made or action defended without reasonable notice beforehand given to the Contractor. to the intent that he may have the opportunity of compromising and settling the same.

Government of Ceylon to have power to repay themselves by deductions any monies paid by them by way of penalties or fines.

21.—It shall be lawful for the Government from time to time to deduct and repay themselves out of any monies which shall or otherwise would be payable by the Goverment to the Contractor, the full amount of all monies which shall have been so paid by them, and against the payment of which the Contractor shall be liable to indemnify or reimburse the Government, and the repayment thereof shall be due to the Government under any of the covenants herein contained; and the Government may make such deductions from the monies payable to the Contractor under this Contract, or at their option sue for or otherwise recover the amount so due.

Contractor to cause peace to be preserved.

22.—The Contractor shall at all times during the progress of the said works, take all requisite precautions, and use his best endeavours for preventing any riotous or unlawful behaviour by or amongst the laborers, workmen and others employed in the works for the preservation of the peace and protection of the inhabitants, and the security of the property in the neighbourhood of the works.

Contractor not to sub-let or assign Contract without license.

23.—The Contractor shall not assign this Contract, nor shall he sub-let the works thereof to any extent or in any manner beyond what in the opinion of the Engineer shall be necessary and customary, and no sub-Contract for the execution of the said Railway and works hereby contracted for, nor any assignment of this Contract, shall exonerate the Contractor from his liability under these presents.

24.—The Contractor shall not sell or otherwise dispose of or remove, except for the purposes of the Contract, any sand, stone, clay, soil, ballast, earth, or other materials of any kind or description whatsoever which may be obtained from the excavations, embankments, or from any lands in the possession of the Government, and shall not sell or otherwise appropriate any buildings or produce (other than trees and brushwood) upon the site of the works at the time of delivery of possession of the land, but the same are and shall be deemed the property of the Government, if they so desire.

RAILWAY EXTENSION

Contractor not to dispose of materials.

25.—The Contractor shall from time to time as and when required, furnish the Engineer with a statement in writing of the arrangements he proposes to adopt for the execution of this Contract, and in case such Engineer shall at any time or times consider any alteration in the same desirable, the Contractor shall be bound to conform thereto.

Contractor to furnish Engineer with statement of mode of executing works.

26.—The Contractor shall accept all drawings as correct, and shall execute all bridges, tunnels and other works, as shewn on the plans, drawings and sections from time to time to be furnished to him, and in case of any discrepancy in the respective drawings between the figured dimensions and the measurements taken from the respective scales, the former shall in all cases be considered as correct and binding upon the Contractor, and he shall provide at his own expense copies of such plans, sections and working drawings as he may require.

Contractor to accept drawings as correct.

27.—The centre line of Railway and the extent of land taken or to be taken in respect of the Railway and its stations and works has been or will be staked out, but the Government will not be responsible for the accuracy thereof, nor of the sections showing the surface of the ground, but the Contractor shall set out the respective works, and the responsibility of completing them in conformity with the provisions of this Contract shall rest with him.

Government not to be responsible for accuracy of lands staked out.

28.—The centre line, as proposed by the Government, where not already set out, shall, together with such modifications thereof as may under the Contract be made, be set out by the Engineer either at once or within a reasonable period after application made by the Contractor for the purposes of the work; but when once set out, it shall be the duty of the Contractor to maintain all clearing marks, pegs and bench marks; and in case the Contractor shall desire to make any alteration or deviation in such line, he shall, either at once or within a reasonable period after application made by the Engineer, set out and mark out on the ground such deviations as he may desire to make, and prepare plans and sections of the same, with designs of works of art applicable to the proposed changes of route for the consideration of the Engineer. The Contractor to find all pegs, stakes and clearing necessary for the use of the Engineer in setting out the line, or in checking surveys and levels of deviations, and checking the setting out of the works of art and the periodical measurement of work executed and materials supplied. The setting out of all works of art to be done by the Contractor, who is also to be responsible for the accuracy of the setting out, even when done by the Engineer.

Centre line to be set out, with modifications within reasonable time; when set out, Contractor to maintain clearing, mark pegs, &c.

Modifications suggested by Contractor to be set out at his own cost.

29.—The Contractor shall take upon himself the responsibility of the sufficiency of each and every work as drawn or specified, and the correctness of the quantities thereof, and whether the provisions of this Contract for the permanent completion of the respective works are adequate or otherwise, that is to say, whether the numbers of works of art be sufficient, whether the depths of the foundations and the dimensions generally of any of the bridges or any other erections, or the slopes of the cuttings, size of drains or of waterways, of bridges, viaducts, or culverts, as shewn on any drawings or specifications furnished to him shall be sufficient or not; and in case any of the same shall during the execution or maintenance of the works appear in any respect inadequate, or in case any additional precautions whatever may appear requisite in the opinion of the Engineer for the due and substantial completion of the respective works specified, the Contractor shall execute the same at his own cost and charge, without being entitled to any addition to the amount of the Contract, it being further understood that no extras are to be allowed except as hereinafter mentioned.

Contractor to be responsible for the correctness of the drawings, &c.

30.—The Contractor shall from time to time make any alterations in the Railway and works which the said Engineer shall think necessary, whether in the way of additions, deductions, or deviations, and he shall, when ordered by the Engineer, omit any works herein contracted for or any part of them, or execute any new or extra work; and such alterations and additions or omissions shall not vitiate nor affect this Contract.

Contractor to make alterations, deviations, &c., if required.

31.—Under no circumstances will any extra payment be allowed in respect of any of the additions or alterations contemplated by Article 21 of the Specification.

Alterations made by order for the purposes of stability, completeness, &c., not to be paid for as extras.

32.—No work will be allowed to be taken into account as additional to the guaranteed Contract amount, without written instructions from the Chief Resident Engineer to the Contractor defining such work as work additional to the Contract. Provided always, that if the Contractor, on being ordered to execute any work, considers that it ought to be treated as liable to payment as additional work, he may, prior to the commencement of such work, represent such case in writing to the Chief Resident Engineer, and on his refusal

Station and extra works.

Value of alterations how estimated.

to admit such work as additional work, the Contractor shall within a month send a statement to the Consulting Engineer of such claim for his consideration and decision, giving at the same time a copy of such statement and claim to the Chief Resident Engineer for his observations thereon. Failing compliance with this condition, the Contractor shall be absolutely barred from raising any claim in respect of additional work.

Disputes as to extra work to be settled by Consulting Engineer.

33.—The amount of work claimed by the Contractor as an extra shall be ascertained by admeasurement at the time of execution, and the value thereof, if allowed as an extra, shall be paid for according to the Schedule of Prices annexed hereto. In case of dispute between the Contractor and Chief Resident Engineer as to value, the same shall be determined by the Consulting Engineer, on the certificate of the Chief Resident Engineer, and such certificate as regards quantity, extent, time, mode of execution and other particulars necessary to enable the Consulting Engineer to decide, shall be final and binding as to all matters therein mentioned, and the award of the Consulting Engineer shall be conclusive and without appeal.

All beasts of labor, plant and materials to be property of the Government.

34.—All beasts of labor, plant and materials brought or left upon or near the site of the works, or imported into or shipped to Ceylon by or by order or on account of the Contractor, to be used and employed on or for any of the purposes of the said works, shall become and be considered as the property of the Government, subject to the agreement next hereinafter contained for the benefit of the Contractor, and the same or any part thereof shall on no account be taken away, used or disposed of by him or any other person whomsoever, except for the purposes of the works, without the license and consent of the Engineer to be given in writing; but the Government shall not be answerable for any loss or damage of or to the said materials, beasts of labor, engines, or tools.

Upon completion of works Contractor may remove beasts of labor, plant and materials.

35.—Provided always, that upon the completion of the said Railway and works hereby contracted to be done, such completion to be certified as hereinafter mentioned, and upon payment by the Contractor of all such monies, if any, as shall be due from him to the Government under any of the Covenants herein contained, and on the due performance of the said Covenants, such of the said beasts of labor, plant or materials as shall not have died, or been used, or converted in the said works, and shall remain undisposed of and in the custody of the Government, shall be delivered up or relinquished by them to the Contractor for the purpose and upon the condition of his removing the same immediately at his own costs from the works and premises of the Government. Should the Government, however, then desire to retain possession of the said beasts of labor, plant or materials, or any of them, they shall be at liberty so to do, paying for the same such price as may be fixed by arbitration by two arbitrators or their umpire appointed in the usual manner.

If Engineer not satisfied with plant, other to be provided.

36.—If the Engineer shall at any time or times consider the number of workmen or beasts or the amount or character of the plant or materials employed or provided by the Contractor in, upon, or for the purposes of the said works, to be insufficient, inadequate, or improper for the due advancement of the works towards completion, or that the several and respective works are not progressing with due diligence and despatch, then and in every such case it shall be lawful for the Engineer immediately to give notice in writing to the Contractor to dismiss any of the agents, overlookers, and workmen, and to remove any unsuitable men, beasts, plant or materials, and to require the Contractor to appoint, in lieu of such persons, other fit and proper agents and overlookers, and to employ other workmen or to provide other beasts, plant, and implements, and also to make such additions to the agents and overlookers or men employed, or to the number or amount of the beasts, plant, and materials, or change in their character, as the Engineer may reasonably think necessary or expedient either until the completion of all or any of the said works, or for a limited period as by such written notice or notices shall be required. And in case the Contractor shall not thereupon, or within such period as may be thereby required, in all respects comply with the same, then and in every such case it shall be lawful for the Government or their Engineer on account and at the costs of the Contractor to remove unsuitable agents, men, plant, or materials, and at the like cost to provide and employ such additional agents, overlookers and workmen for such time, and to purchase and provide such additional or other beasts, engines, plant, and materials, respectively as he may think necessary, and to pay such additional agents, overlookers, and workmen such wages, and to pay for such additional beasts, plant, and materials respectively such prices as the Engineer may think proper, all which wages and prices respectively if paid by the Government, and any extra expense the Government may be put to shall be thereupon repaid to them by the Contractor, or the Government shall be at liberty to retain or deduct the same out of any money or other sources of payment which shall be then due or shall thereafter become due from them to the Contractor by virtue of these presents or otherwise, or from the sale of any of the above beasts of labor, plant, and materials which the Government under the circumstances may possess themselves of, and the Government may make such deductions at their option from all or any of the sources of payment herein referred to.

In default, Engineer may provide other men and materials.

If Contractor fails to execute works to the satisfaction of the Engineer, or in

37.—If the Contractor be declared Bankrupt or take or attempt to take the benefit of any Act of Parliament for the relief of Insolvent Debtors, or if the Contractor, from any cause whatever (other than such a cause as the Consulting Engineer certifies to be an unavoidable accident or default on the part of the Government), fails to complete and

deliver over the said Railway and works to the Government by the time in that behalf fixed by or under this Contract, or any extension thereof as herein provided, or if the Contractor in the judgment of the Consulting Engineer fails to proceed with due despatch in the execution of any of the works, or in any other respect fails in the due performance or observance of this Contract, then and in every case, if the Consulting Engineer certifies that it is in his judgment proper for the Government so to do, the Government may thereupon take possession of the works and of the Contractor's plant, beasts and materials provided for the work, and employ such persons as they may think fit, either by contract or by measure, and value, or otherwise as the Consulting Engineer certifies to be proper to proceed with and complete the works and maintain the same, and in other respects to fulfil the obligation of the Contractor under this Contract, and may use for such purposes the Contractor's plant, beasts, and materials so taken possession of, or it shall be lawful for the Government at their option in such and the same cases by notice in writing under the hand of any authorized officer or their Secretary, to be delivered to the Contractor or left for him as aforesaid, absolutely to determine this Contract.

case of Bankruptcy, Government may at their option take the works into their own hands or determine the Contract.

38.—If the Government elect to proceed with the works, a valuation of the Contractor's beasts, plant, and materials so taken possession of shall be made by the Engineer, and the Government shall give to the Contractor credit for the value thereof as certified by the Engineer, and shall debit the Contractor with all sums actually paid to him under this Contract, and with all the payments, costs, damages, and expenses made and incurred by the Government in and about the completion and maintenance by the Government of the Railway and works, and the fulfilment in all respects of the Contractor's part of this Contract; and the Consulting Engineer shall after the completion of the Railway and works and the maintenance thereof, certify whether on the balance of the accounts under this Contract between the Contractor and the Government there is any and what sum due from either party to the other; and the Government or the Contractor, as the case may be, shall on demand pay to the other party the amount of the balance so certified to be payable.

In case the Government takes the works.

39.—In case the Government elect to determine the Contract, they shall pay to the Contractor for such Work as shall have been done by him proportionally, such sum as the Consulting Engineer shall consider to be sufficient, such Consulting Engineer being at liberty in fixing the amount to take into consideration what will be the proper compensation for the loss which the Government may have sustained by such default; but all materials, beasts and plant provided by the Contractor for the purposes of the work shall remain the property of the Government, who shall be at liberty to use, apply and dispose of the same respectively for the purposes of the work hereby agreed to be executed until the completion thereof, when the same shall revert to the Contractor, without any allowance for the losses, wear, tear and injury they may have sustained, under and subject to the like provisions as are hereinbefore contained, in contemplation of the works being completed by the Contractor.

In case the Government determines the Contract.

40.—In the accounts between the Government and the Contractor, credit shall be given to the Government for all damages, penalties and expenses payable according to this Contract, by the Contractor to or for the Government as being payments made by the Government to the Contractor in part of the sum to be paid to him by the Government according to this Contract.

Credit to be given to the Government for damages, penalties, &c.

41.—If at any time during the progress of the works, or previously to the completion of the same, or during the period of maintenance thereof, the Engineer shall consider any materials to be unsuitable, or any part or parts of the said Railway and works to have been unsoundly or imperfectly executed, or not made of proper materials, or not performed in a workmanlike manner, or if any accident or damage to the said works from any cause shall occur before completion thereof and expiry of the period of maintenance thereof, then and in every such case the Contractor shall cause all such materials and the works which shall be so injured or damaged, or mentioned or referred to by the Engineer as being so unsound or imperfect as aforesaid, to be forthwith removed if and as occasion shall be, and to be executed or reinstated properly and of proper materials, and in all respects according to this present Contract to the satisfaction of the said Engineer, without any extra charge whatsoever, and in the event of the Contractor neglecting for seven days after notice in writing given to him by the Engineer, requiring any of the matters mentioned in this clause to be done and performed, it shall be lawful for the Engineer to do and perform the same in the stead of the Contractor, but at the Contractor's costs and risk.

Contractor to re-execute faulty works.

42.—The Contractor shall at his own expense for the space of five years, to be computed from the time when the Railway shall have been completed, and the Engineer shall have given his certificate of completion thereof, uphold and maintain in good and perfect repair (and where necessary renew) in sound and substantial condition the whole of the Railway and works hereby contracted for, with all and all manner of necessary reparations, amendments and renewals whatsoever, and make good all derangements of the said Railway and works, from whatsoever cause arising other than civil war, rebellion, earthquake or volcanic eruptions, and will find and provide all necessary materials for those

Contractor to maintain works for five years after completion.

CORRESPONDENCE.

Contractor to take to materials provided at a price to be determined by arbitration.

Permanent materials taken to be considered work executed and materials provided by Contractor, but temporary buildings material and plant to become property of Contractor on completion of the work.

purposes, and will keep, maintain and leave the same in good repair and working order to the satisfaction of the Engineer.

43.—The Contractor will take to such materials and plant as are already provided, at such price as shall in case of difference be settled by two arbitrators (one to be chosen by the Government and one by the Contractor) and their umpire in the usual manner, and the total amount of such valuations shall be debited to the Contractor as monies paid to him on account of the Contract. Permanent materials so taken to shall be considered as work executed and materials provided by the Contractor under this Contract, and any materials or plant so taken to, which may on the completion of the work not have become part of the Railway or its proper accessories, shall be the property of the Contractor.

Valuation of work to be made without reference to its cost.

The valuation of such permanent materials shall be determined without reference to their original cost, but solely with reference to their value to the Contractor in the execution of the Contract at the time of valuation and their then actual condition.

Valuation of plant &c., taken to by Government on completion of work.

The valuation of the plant and of the materials referred to above and of everything taken to by the Government on completion shall be based on the market value at the time of the valuation, a due allowance being made for depreciation, when such depreciation would in any way affect the purchaser.

Contractor may use any part of Railway while in construction for temporary purposes.

44.—The Contractor shall be at liberty at his own risk to use any part of the Railway while in construction for the temporary purposes of the said Railway and works, subject to the rights of the Engineer, at any time prior to the Railway being finally accepted, to reject any part thereof, and any of the works which may have been damaged by such Contractor.

Plants and materials purchased in Europe to be submitted for approval of Consulting Engineer.

45.—All plant and materials manufactured in Europe and shipped by the Contractor, shall before being removed from the places at which they are prepared, be submitted for the inspection and approval of the Consulting Engineer, or some agent named or approved of by him; and the Contractor shall give him 10 days' notice before removing such plant and materials for shipment, so as to enable him to make his inspection.

Shipments at Contractor's risk.

46.—All articles so shipped for Ceylon shall be so shipped and shall be transmitted to the works at the expense and risk of the Contractor, and if any such articles be lost, abstracted or damaged, the Contractor will make good or replace the same to the satisfaction of the Consulting Engineer.

Contractor to pay freight, &c.

47.—The Contractor will pay all the expenses of freight, and insurance of all plant and materials manufactured in Europe, and shipped for Ceylon, and all other expenses of and incidental to the delivery thereof at the works; and the Consulting Engineer shall add the expenses of freight and insurance to the value thereof in certifying the amount to be paid for the same.

Gross amount to be paid for construction.

48.—The Government shall pay to the Contractor for and in respect of the said Railway and works, matters, and things herein contracted to be executed, and done, and completed, and in respect of materials and articles to be provided and used by the Contractor for the purposes of such Railway and works and undertakings, and in respect of all other matters to be done or performed by the Contractor under the powers of this Contract, exclusive of maintenance, the gross sum of £ , subject to any addition or diminution thereof, if any, under the provisions of this Contract, and this Contract is to be considered as a guaranteed Contract at that amount, subject as aforesaid for a Railway of a perfect and complete description, with all proper accessories except land, and such sum shall include and cover contingencies of every description.

Monthly payments to be made in sterling or other current money subject to deductions of 10 per cent. to form a guarantee fund.

49.—The said sum shall be paid in such proportions as shall in manner hereinafter mentioned be certified, subject to a deduction of ten per cent. to be held and retained in hand by the Government as a guarantee as herein mentioned, and which per-centage so to be deducted as aforesaid, is hereinafter referred to as the Guarantee Fund. All payments shall be made in Ceylon in the current money of Ceylon, 10 Rupees being taken as equivalent to One pound sterling, except such payments are made by way of advance on goods, plant, and material sent forward from Europe, payments for which are herein provided for.

Contractor to furnish returns of the number and description of his Agents, Foremen, &c.

50.—The Contractor is to furnish on demand periodically, or from time to time, such returns as may be required by the Engineer of the number and description of Agents, Foremen and workmen of all sorts in his employ, and of the materials and plant shipped, and shall produce such vouchers for the same as shall be reasonably required.

Schedule of payments to be prepared prior to commencement of works.

51.—A Schedule for payments shall, prior to the commencement of the work, be prepared by the Chief Resident Engineer and the Contractor, under the direction of the Consulting Engineer, and subject to his decision in case of difference, such Schedule being however subject to correction hereafter, if decided to be necessary, by the Consulting Engineer.

52.—At the latter part of every month the Assistant Engineers jointly with the Contractor's agents shall prepare progress measurements of the work done and materials supplied during that month, and on the 1st day of the next succeeding month the Chief Resident Engineer shall, after having been furnished with such progress measurements, prepare an estimate of the value of the work executed and materials supplied, included in such progress measurement. This estimate will, for the purposes of the monthly Certificate, be based on the prices of the Schedule above named.

Progress measurements to be made monthly, and Engineer to give certificate of value of work done on the 1st of each month.

53.—For the purposes of the monthly certificate, all the Contractor's permanent materials not manufactured in and shipped by the Contractor from Europe, shall be deemed to be provided when the same respectively are deposited on or near to the site of the Works.

For purposes of monthly certificate permanent materials on site to be valued.

54.—Every monthly certificate which shall be given by the Engineer shall be regarded as only provisional and approximate, and all payments made on such monthly certificate shall be regarded as being open payments, and shall respectively be subject to the revision and settlement of the Chief Resident Engineer.

Monthly certificates to be considered provisional and approximate.

55.—In the event of the Engineer deciding that from any circumstances the monthly measurements or estimates previously made do not truly represent the proportion of work done having reference to the total value of the Contract, and the work remaining to be executed by the Contractor, the said Engineer shall have power from time to time to correct the total result by adding thereto or deducting therefrom such sums as after communication with the Contractor or his principal agent he may deem to be just and fair; and such addition or deduction shall be credited or debited (as the case may be) to the Contractor at such time as the Engineer may think fit, the certificates of the said Engineer shall, except in cases of unavoidable delay, be given on the first day of each month, and the money payable thereon after making the deductions contemplated by the Contract, shall be paid to the Contractor or his Agent within a week of the granting of such certificate.

Engineer to be at liberty to revise monthly certificates.

Engineer's certificate to be given on 1st of each month, and money due to Contractor to be paid within one week.

56.—When any materials manufactured in Europe, and shipped by the Contractor for Ceylon (but not including Contractor's plant and materials,) are inspected and approved as required by this Contract, the Consulting Engineer shall certify the value thereof at such value or price as will accord with the Schedule for payments for the time being, including the expenses mentioned in Article 47, but making the deductions on account of the guarantee fund, and repayment of advances as provided for in Articles 49 and 58 of this Contract, and on the presentation by the Contractor at the Office of the Crown Agents in London, of any such certificate with the Contractor's invoices, bills of lading, receipts for freight and policies of insurance (effected in some office approved of by the Crown Agents) of the articles so shipped, duly assigned or otherwise transferred to the Government, the amount so certified shall after three clear days from the day of presentation of the said documents at the Office of the Crown Agents, be paid to the Contractor by a cheque or order on the Bankers of the Crown Agents in London, payable at sight.

Value of materials shipped (not including plant) with cost of freight, &c., at Schedule prices, to be paid to Contractor by Crown Agents, such payments to be subjected to deductions of 10 and 5 per cent.

57.—In order to assist the Contractor, the Government will make to him payments on account of the Contract sum to such an amount not exceeding in the whole £1,000, and in such proportions as the Chief Resident Engineer from time to time certifies, to be payable for the expenses of agents and staff shipped from Europe, at the expense of the Contractor and landed in Ceylon, and under engagements with the Contractor for at least one year to work in the execution of this Contract. The Government will also from time to time make to the Contractor an advance to such amount as the Consulting Engineer shall think reasonable on the value of the Contractor's plant and temporary materials (not included in the provision for payment contained in the 56th Article of these presents) shipped by the Contractor for Ceylon, and certified by the Consulting Engineer as requisite and proper for the execution of the Contract works, such last mentioned advance not to exceed £1,000, and to be made from time to time on presentation at the offices of the Crown Agents in London of the certificates of the Engineer, the Contractor's invoices, bills of lading, receipts for freight, and policies of insurance.

Government to advance on expenses of sending out staff to an amount not exceeding £1,000.

Crown Agents to advance on Contractor's plant on certificate of Consulting Engineer to an amount not exceeding £1,000.

58.—The various amounts so advanced in England on account of Contractor's plant and temporary materials, as well as the sum charged to the Contractor for plant, materials and buildings of a temporary nature taken to by him in Ceylon, shall be repaid to the Government by setting off against the same and deducting a sum equal to £5 per cent. on all monies from time to time certified by the monthly certificates to be due and payable in England and Ceylon respectively to the Contractor under this Contract, until such advances are repaid. The whole of the Contractor's plant on which advances shall be so made shall be and remain the property of the Government until entirely redeemed by the deductions above named, and all permanent materials when certified for or taken into account are to be the absolute property of the Government.

All advances on plant and temporary materials to be repaid by the deduction of £5 per cent. on all monies paid to Contractor; plant to remain property of the Government until advances have been repaid.

59.—The deductions of 10 per cent. will continue to be made until the Guarantee Fund amounts to £1,500, and then 5 per cent. will be reserved until the total of the Guarantee Fund amounts to £3,000. One half of the guarantee fund will be released on the certificate of completion of the whole of the Railway works to the satisfaction of the Chief Resident Engineer, and the remainder will be retained as a security for the due fulfilment of this Contract as hereinafter mentioned, until the whole Railway shall have

Guarantee Fund.

Investment of Guarantee Fund.

Government to be at cost or profit of remittances for investment.

been opened for 12 months. The Guarantee Fund will from time to time be invested by the Government in the purchase of Imperial or Colonial Government securities at their option at the cost and risk of the Contractor, and the securities thus purchased shall, when finally handed over to the Contractor, be taken and received by him in full satisfaction of so much of the guarantee fund as may have been originally laid out in the purchase of the same, notwithstanding any alterations that may have taken place in the market value of such securities.

Should the Government deem it advisable to remit to England for investment any or the whole of the deductions made in Ceylon on account of the guarantee fund, the profit or loss arising from difference of exchange or otherwise on such remittance, shall accrue to or be borne by the Government.

Interest on investments to be paid to Contractor.

Both principal and interest of the guarantee fund as and when respectively payable to the Contractor, shall be paid to him wheresoever the investments then stand, whether in England or Ceylon, and such interest as shall from time to time accrue in respect of any such investment shall be paid to the Contractor as and when received by the Government.

Guarantee Fund shall be applied to make good defective works, &c.

60.—The said guarantee fund shall be applied in or towards making good any defect or unsoundness which shall be certified by the Engineer as existing in the Railway or works hereby contracted for, or in the material used in the formation or construction thereof, and any default or neglect of the Contractor in relation to the premises, and also in making good any breach of covenant on his part.

Government to pay Contractor £ per annum per mile for maintenance of railroad.

61.—In addition to the said Contract sum the Government will pay to the Contractor for maintaining and upholding the Railway and sidings, stations, works and accessories in accordance with this Contract during the five years of maintenance at and after the rate of £ per annum for every mile run of main line executed, and in proportion for any less distance, according to length, such sum to be payable monthly on the Engineer's Certificate, in like manner as provided in respect of the gross Contract sum.

Government to provide land for site, or line of Railway, &c.

62.—The Government will when and so often as the Contractor shall reasonably require, provide for and give him possession free of expense, and at such times as the Engineer may deem requisite for the proper execution of the works, so much of the land and property to be taken for the site or line of the Railway and the permanent works of the same, and for side cuttings and spoil banks as he may by notice in writing require. Unless such notice shall be given by the Contractor, and shall describe the quantity and situation of the land required, any interruption or delay of the Railway and works arising from or occasioned by such non-delivery of the possession of the land or property as aforesaid, shall not be deemed a breach of any of the covenants herein contained, and the Contractor shall not be entitled to any extension of time in respect of such interruption or delay.

Appointment of Consulting Engineer.

63.—The Government will forthwith appoint a competent English Civil Engineer to be the Consulting Engineer in the matter of this Contract, and will from time to time in case of his ceasing to be their Consulting Engineer, appoint another such Civil Engineer in his place, provided however that if the Contractor shall within 14 days after personal service on him of notice in writing from the Government of each such appointment, or within 80 days after service of such notice on his agent, object to the person so named as Consulting Engineer, it shall be lawful for the Contractor to state his objections privately and confidentially to the President for the time being of the Institution of Civil Engineers; and on the certificate of such President that such objection is reasonable, the Government will thereupon nominate some other competent English Civil Engineer as Consulting Engineer, and so from time to time until the Consulting Engineer is finally appointed. The Government shall have power from time to time if they think fit, to cancel and vary such appointment subject to such right of objection on any new appointment as aforesaid.

No breach on part of Government to annul Contract.

64.—No breach or non-observance on the part of the Government of any of the agreements herein on their part contained shall annul these presents, or discharge the Contractor from the observance and performance of the several covenants on his part hereinbefore contained, but compensation for damage, if any, shall be made to the Contractor, or an extension of time at the option of the Consulting Engineer given him for such breach or non-observance by the Government, such compensation or extension of time to be fixed by the Consulting Engineer.

Disputes to be referred to Consulting Engineer.

65.—In case, and so often as any dispute shall arise between the Government and the Contractor concerning or relating to the said works hereby contracted for, or any of them, or any covenant, engagement, matter or thing herein contained, or the construction thereof except as to the value of the plant, and materials and works already done and taken to by the Contractor on the commencement of the Contract, and as to the value of the plant and materials if any to be taken to by the Government on the completion of the works, the subject of every such dispute shall in every case, except where otherwise provided, on the demand in writing of either party, be referred to the arbitration and award of the Consulting Engineer.

Decision of Consulting Engineer to be final.

66.—The decision of the said Consulting Engineer as such arbitrator upon all matters referred to him shall be final and without appeal.

Consulting Engineer to be at liberty to make several awards.

67.—The arbitrator shall have full power to make, if he think fit, several awards instead of one award, and every such award though not on the whole matter shall be conclusive so far as it extends, and as if the matter awarded on were the whole matter referred.

68.—The arbitrator shall have full power to proceed in the absence of both or either of the parties, after giving to both parties such notice as the arbitrator thinks sufficient of his intention so to proceed.

Ex parte.

69.—The arbitrator shall have full power to inspect the accounts of both parties, and examine on oath, affirmation, or on statutory declaration in lieu of oath, the Contractor and the officers, agents, servants and witnesses of the parties respectively.

To examine.

70.—The costs of the reference and of the award shall be in the discretion of the arbitrator.

Costs of reference and award.

71.—As far as the same are applicable, and not hereby varied, the provisions of the Common Law Procedure Act, 1854, with reference to the settlement of disputes by arbitration, shall apply to the arbitration agreed to in these presents.

Interpretation of clauses of Common Law Procedure Act, 1854.

72.—The Crown Agents shall not be in any wise personally bound for the acts and observances of the said Government under these presents, or answerable for any default or omission in the observance, performance or fulfilment of the acts, deeds, matters or things which are hereby made obligatory on the Government.

Non-liability of Crown Agents.

IN WITNESS whereof the said persons, parties to these presents, have hereunto set their hands and seals; the day and year first above written.

Signed, Sealed, and Delivered by the said ⊕ Seal
and ⊕ Seal
by ⊕ Seal
in the presence of

Signed, Sealed, and Delivered by the said
this day of A. D. 186 , in the presence of

The first Schedule before referred to.

GAMPOLA RAILWAY.

GENERAL SPECIFICATION AND SPECIFICATION OF RAILS AND FITTINGS.

1.—The contract to be an absolute guarantee to complete the Railway and works, with all accessories of every description at a given sum, and without extras of any sort. Contingencies of every description which may arise being borne by the Contractor, subject to no increase or diminution of price, excepting as is explained in the contract.

2.—The Colonial Government will provide the land, the rolling stock, and the telegraph; they will also hand over to the Contractor such plant, materials, and other things in their possession as will be available for the Railway on the terms named in the contract.

3.—They will allow to the Contractor, subject to the approval of the Engineer, the use without charge of the permanent rails for the construction of the line, provided such permanent rails be only used where the road bed is properly formed, the Contractor being bound to restore these rails to the Government in the work straight and in perfectly good order. The Contractor will have to provide temporary rails for tips, &c.

4.—If desired by the Contractor the Government will allow the use of one locomotive engine for the purpose of ballasting. The Contractor must keep the engine in perfectly good order, and will be charged such sums for the use of the engines as in the opinion of the Engineer will fully cover the cost of their depreciation.

5.—The whole of the works and materials are to be of the best character in every respect, and the work in all its details is to be executed to the entire satisfaction of the Engineer appointed by the Government for that purpose, any omission in the specification not being admitted as a ground for the omission of any work, or any accessory to the work which in the opinion of the Engineer may be necessary to produce a perfect railway, complete in all respects, and equal in character to the best constructed English railways, including at the same time all special provisions which may be necessary to meet local requirements or the effects of a tropical climate.

6.—All rails, fittings, iron girders and other things provided in England are to be subject to the approval in all respects of the Engineer who may be appointed by the Government for that purpose.

7.—The order and manner in which the work is to be carried on shall be under the absolute control, so far as work in England is concerned, of the Consulting Engineer, and so far as work in Ceylon is concerned, of the Chief Resident Engineer.

8.—The whole of the Railway and stations shall be properly fenced in. The ordinary fence of the Railway shall be that known as 4 strand wire fencing. Artificial fencing may however be dispensed with, when natural obstacles or drains shall, in the opinion of the Engineer, be sufficient; at and about stations, dry walling or palisade fencing will be required.

9.—All proper gates, lodges, approach roads, diversions of roads, level crossings, day and night signals, gradient and quarter mile-posts and other accessories shall be provided as part of the guarantee contract.

10.—All necessary drains are to be provided, both in side drains, catch-water drains, culverts, cross drains, &c. The amount of waterway to be provided in culverts, bridges, flood arches, &c., shall be such as the Engineer may consider to be necessary, but if by any error in judgment an inadequate waterway should have been sanctioned, and the error should be discovered while the works are in the Contractor's possession, he will have to make the necessary increase at his own cost.

11.—The line to be a single line, of a gauge of 5 feet 6 inches, the formation width to be made and maintained to 20 feet, or to a greater width, if it should be found necessary, for the purposes of drainage. In excavations in rock or other hard material, the Engineer may, at his discretion, allow a formation width of less than 20 feet, provided that the Contractor shall be bound to increase such width at his own cost, at any time during the construction or maintenance of the works, if required by the Engineer.

12.—The slopes of the earthworks shall be such as, in the opinion of the Engineer, may be necessary for the safety and security of the works, and soiled where required by the Engineer. All necessary provision and protection shall be applied to prevent injury to the works by floods, or by rain fall, or the wash of drainage, or atmospheric influences.

13.—The bridges, viaducts, flood openings, culverts, and all works of art shall be of a permanent nature, but no more expense will be required on the works of art than is necessary to produce solid and permanent structures.

14.—The masonry may be of rubble, well bonded and bedded, but not necessarily coursed. Ashlar work will not be required, but plain rough coping will be required to parapet walls, &c. The best mortar in all cases to be used, excepting where dry walls may be allowed for supporting banks. Cement may be required by the Engineer where he thinks it necessary.

15.—Brickwork to be of the best plain brickwork of the country.

16.—Timber will not be allowed for any of the structures, excepting to the limited extent shewn in the drawings of Mr. MOLESWORTH for the floors of small girder and deck bridges. Where flat tops may be found economical or desirable they shall be of wrought iron plain beams for small spans, and either wrought iron box girders, or wrought iron lattice beams for large spans.

17.—In all cases where iron, either wrought or cast, is used it must be fully protected from rust or injury by paint, boiled oil, or tar, according to the discretion of the Engineer.

18.—All ironwork or other materials sent from Europe must be of the best description as to material, construction and workmanship, and must bear such tests as the Engineer may think fit to prescribe. The Contractor shall provide all necessary assistance and implements for testing the same and inspecting their quality at the establishments where they are made or prepared.

19.—All timber used for the floors of small bridges must be of a durable character and such as is fully approved in the Island for the purposes of construction, such as the best millile, ironwood, jack, gal-mendora, ebony or paloo; and no timber must be brought upon the work but such as is specially approved and sanctioned by the Engineer.

20.—Where tunnels may be made, they shall be efficiently lined, where necessary, with brick or masonry, well bonded and bedded, and shall have a clear width of 16 feet and a clear height of 18 feet.

21.—The general character of the structures will probably be such as is shewn and described in the drawings and reports of Mr. MOLESWORTH, exhibited to the Contractor with this specification, but these are not to be regarded as contract drawings in any way which should limit the guarantee nature of the contract, nor is the Government in any way bound by the quantities or rates in Mr. MOLESWORTH's estimates, and if any alteration of line or levels or additional structures of any short, larger or increased number of openings, or greater dimensions or increased quantities, either in earthworks or works of art, or things not named in Mr. MOLESWORTH's reports or estimates, are found to be necessary for the stability and completeness of the work, and as such at any time ordered by the Engineer, the Contractor shall execute such additional work without extra charge. The Engineer shall also have full power to vary and alter the designs as he may think fit, without any extra charge being made on that account by the Contractor.

22.—The sleepers to be provided for the permanent way shall be 9 feet 9 inches long by 10 inches by 5 inches roughly squared. They shall be of the best Baltic fir thoroughly creosoted under a specification for sleepers, and preparation to be settled by the Consulting Engineer, the average spaces being 3 feet centre to centre of sleepers. The sleepers are to be accurately bedded by machinery before being creosoted, great care being taken not to cut the beds too deep.

23.—The ballast to be broken stone or well cleaned cabook gravel or river ballast 2½ yards cubic to the yard run; coarse clean sand may be allowed for the bottom ballast to one-third of the total depth.

24.—The rails and fittings are to be according to the specification hereunto annexed, marked C. C. No. 1, 2, 3, 4, and 5.

25.—The line is to commence at the station as already fixed at Péradeniya, and to finish near to Gampola at the point shewn on the plans, and described in the papers of Mr. MOLESWORTH.

26.—The Contractor will not be finally bound to the route laid out or to the works as designed, but he may, subject to the general conditions herein-named, submit to the Engineer such alterations or deviations as he may desire, provided always that it shall be in the absolute discretion of the Engineer to refuse such alterations or deviations if he considers they would in any way affect the permanent stability or efficiency of the works. And provided also, that any deviation proposed

shall not involve worse conditions as to curves or gradients, or otherwise interfere with the value of the line for traffic purposes.

27.—The contract is to include the laying, wherever required, of 140 chains of sidings, including rails, fittings, sleepers, ballasting, points, crossings, switch boxes, guard rails, and switch locks.

28.—It is also to include the erection of station buildings and workshops, providing and fixing of turn-tables, weighbridges, cranes, water tanks, all earthwork at stations beyond that necessary for the single line of Railway, as well as the signals, approach roads, drainage, fencing, and other accessories elsewhere named or implied.

29.—During the execution of the works, the Contractor will be bound to maintain everything in perfect order and condition at his own cost, making good all failures which may have arisen from any cause whatever. Diversons of public roads made necessary by the Railway works shall after being opened to public use, be maintained and upheld by the Contractor (for a period not exceeding 12 months) until in the opinion of the Engineer such diversions shall have arrived at a fair average condition, as compared with the unaltered portions of such roads.

30.—From the time when any length of the Railway is completed and opened for public traffic, the Contractor shall for a period of five years, and to the satisfaction at all times of the Engineer, completely maintain and uphold the line and works, slopes, fencing, drainage, and all the appurtenances of the Railway and works executed under this contract, including the sidings and stations; such maintenance and upholding are to include reproduction, whenever necessary, and the providing of all rails, sleepers, fittings, and materials of every description, and the making good of damage or failure of all sorts from any cause whatever according to the ordinary construction of of contracts in this country or India for the complete maintenance and upholding of Railways.

C. C. No. 1.– *Specification referred to in Clause 24 of the General Specification.*

CEYLON RAILWAY.

SPECIFICATION FOR RAILS.

Weight. The weight will be 72 lbs. per yard.

Form, section, &c. The form will be the Vignole's or Contractor's form, with an adequately broad base, according to the template already adopted, and to which the rails must be accurately rolled.

Variation in weight. No rails will be received varying more than 1 lb. per yard from the weight determined on.

Lengths. The lengths of rail to be 21 feet, but with such proportions of 18 and 15 feet, as may be from time to time ordered. No variation from the lengths determined on exceeding $\frac{1}{8}$th of an inch will be allowed.

Method of manufacture. The entire method of manufacture of the rails, as well as the quality and mode of preparation of the iron used therein, shall be such as the Engineer shall decide or fully approve, as calculated in his opinion to produce rails of first rate quality and description.

Each rail is to be made from a pile not less than 9 inches high by 8$\frac{1}{2}$ inches broad, and containing not less than one third of its whole weight of No. 2 iron. The disposal and dimensions of the bars forming the pile will be hereafter determined by the Engineer.

All these bars are to be of uniform section, and in whole lengths, no short or irregular shaped pieces, scraps or rough ends of bars being used.

The rail pile is to be rolled at a welding heat into a bloom of about half the original sectional area, which, being again raised to a welding heat, is to be rolled into the rail.

The manner of making of the No. 2 iron to be used in the pile must be such as is approved by the Engineer. Each slab or bar must be worked at two heats, and the pile from which it is formed must be of large size and contain only perfect bars.

The Engineer is to have the power of altering the arrangement of the rail-pile, or the general method of manufacture during the progress of the contract in any way he may consider expedient, it being, however, understood that he shall not increase the proportion of No. 2 iron used.

Quality of finished rails. The quality of the finished rails, as regards toughness and strength, shall be such as is satisfactory to the Engineer, who shall have power to test the same, at the Contractor's expense, in any manner he may think fit.

Perfection of manufacture. The whole of the rails must be of uniform section throughout, and perfectly true and straight, and any that are bent or warped in the manufacture must be straightened by pressure and not by hammering. They shall moreover be perfectly sound and free from spills, cracks, flaws, scoriæ, imperfect welds, or defects of any kind; and the ends shall be cut accurately true and square.

Marking. Each rail is to be stamped on the side distinctly, with the maker's name, the month and year of the manufacture, and the initials of the Railway.

Holes. The rails shall be punched with such holes and in such positions as the Engineer shall hereafter determine, either for holding down the rails for fishing or for any other purpose.

Any variation of more than 1-32 of an inch from the correct sizes or positions of the holes, will render the rail liable to rejection.

Testing apparatus and labour.

All labour and assistance, tools, gauges, apparatus, &c., which the Engineer may require for the purpose of testing, inspection, weighing or gauging the rails, or for otherwise satisfying himself of the due performance of the conditions of the contract, shall be provided by the Contractor free of charge, either at the works or at the place of shipment, or both, as may be required by the Engineer.

Guarantee.

The Contractor will be required to enter into a guarantee to supply, free of charge, new rails to the extent of any which may be certified by the Engineer to have failed, from defective quality or manufacture, at any time not exceeding two years from the time when the portion of Railway on which they are, shall have been opened for public traffic.

C C. No. 2.—*Specification referred to in Clause* 24 *of the General Specification.*

SPECIFICATION FOR FISHING PLATES.

Section.

The fishing plates are to be 11-16 inch thick, of a section to fit the underside of the head and the upperside of the flange of the rail, and with recessed face to hold the nuts of the bolts.

A correct template will be furnished to the Contractor, and the plates, when finished, must exactly correspond therewith.

Length.

They are to be 16 inches long, and must be sawn off square without burs or deformities at the ends.

Perfection in form.

They are to be perfectly straight and smooth on every surface, free from twist, and of uniform section throughout.

Material.

The description of pile for rolling the fishes, and the kind of material used therein, shall be such as are satisfactory to the Engineer, and must be specially sanctioned by him.

The quality of iron in the finished plates shall also be subject to his approval, and they shall be submitted to such test as he may think necessary.

Holes.

Each plate must be pierced with four round holes, of such dimensions and placed in such positions as the Engineer will direct. These holes must be clean and true, square through the plate, and exactly in the centre of the width, free from burs on either side, and perfectly accurate in size and position. The manner of making the holes shall be such as the Engineer shall approve.

Oiling.

Every plate is, after the holes are made, to be heated and immersed in boiled linseed oil.

Patent right.

The patent right upon the fishes must be paid by the Contractor.

C.C. No. 3.—*Specification referred to in Clause* 24 *of the General Specification.*

SPECIFICATION FOR BOLTS AND NUTS.

General description.

The bolts will be $\frac{3}{4}$ inch thick, and $3\frac{1}{2}$ inches long from the underside of the head, which will be square. The nuts will be square.

The bolts and nuts must exactly correspond both in make and dimensions with patterns to be deposited with the Engineer, and duplicates of which will be furnished to the Contractor.

Weight.

They are to weigh one pound each.

Material.

The iron is to be of a strong fibrous quality, equal to "best" Staffordshire, and shall be specially subject to the approval of the Engineer.

Method of manufacture.

The method of manufacture, whether by machinery or by hand, shall be such as the Engineer shall approve.

The bolts are to be made from square iron, swaged down, and the heads are to worked out of the solid, and not welded on.

Workmanship.

The workmanship and finish must be fully equal to that of the patterns. The forging is to be perfectly sound, square and true, especial care being taken that the internal faces of the head and nut are exactly square with the axis of the bolt.

The thread is to be Whitworth's standard, to be cleanly cut, and to hold full to within two inches of the head. The nut is to fit so tight upon the bolt that it cannot be moved without a spanner.

The bolt, when screwed, must pass freely up to its head into a hole 13·16 of an inch diameter.

Packing.

The bolts and nuts are to be well oiled and packed in good strong casks, well secured and fit for a sea voyage.

C.C. No. 4.—*Specification referred to in Clause* 24 *of the General Specification.*

SPECIFICATION FOR DOG SPIKES.

The spikes are to be 6 inches long and $\frac{3}{4}$ inch square, with a wedge point. The head to be $\frac{11}{16}$ deep, and to project $\frac{1}{2}$ inch over the flange of the rail, with ears of $\frac{3}{8}$ by $\frac{11}{16}$, projecting $\frac{1}{8}$ at each side of the head.

The spikes must correspond in make and dimensions with patterns to be deposited with the Engineer, and a duplicate of which will be furnished to the Contractor.

They shall be made from iron of a strong fibrous quality, and so tough that the head, when hammered cold, shall bend, and not break off with a brittle fracture.

The head is to be worked out of the solid, and neatly formed. The workmanship generally is to be fully equal to that of the pattern.

The spikes to weigh $\frac{9}{10}$ lb. each, or 2,500 to the ton.

The spikes are to be packed in strong casks, well secured,

C.C. No. 5.—*Specification referred to in clause 24 of the General Specification.*

SPECIFICATION FOR BASE PLATES AND FANCY BOLTS.

[*Note.*—Here insert same as specified for the Base Plates, &c., lately sent to Ceylon.]

The Second Schedule before referred to.

E.

CEYLON RAILWAY.

FORM OF TENDER.

I, do hereby offer to make and complete the Railway from Péradeniya to Gampola in accordance with the terms of the Specification marked C.C., and within two years from the date of the acceptance of this Tender, for the guaranteed amount of £ , which sum is to include all accessories of a perfect and complete Railway, excepting the land and the rolling stock, and to include contingencies of every description.

And I hereby offer to maintain and uphold the said Railway and Works, when completed, according to the terms of the said Specification, at the average rate of £ per annum and per mile of main line, for five years.

And I hand herewith an estimate in full detail, with quantities and prices, shewing the calculations upon which my Tender for the construction of the Railway is based.

And I undertake, in the event of my tender being accepted for the construction of the said Railway, to execute, when required, a formal Contract, including such terms and conditions as may be required by the Ceylon Government for the due execution of the said Railway and works in accordance with the said Specification; and I propose and of as my Securities, jointly and severally to the amount of £2,000, for the due fulfilment of my Contract; and I hand herewith letters from the said offering to enter into a bond to that effect, when called upon by the Ceylon Government to do so.

And in order to afford time for the transmission of this my tender to Ceylon, and for its consideration by the Ceylon Government, I agree that this Tender shall be binding upon me for six months from the date hereof.

Dated this day of 186

(Signed)

To the Crown Agents for the Colonies,
London.

Witness to the Signatures of }

Witness to the Signatures of this day of A. D. 186 , at Colombo.

I hereby certify that the Secretary of State for the Colonies has authorized the Crown Agents for the Colonies to enter into this Contract on behalf of the Government of Ceylon.

One of Her Majesty's Under Secretaries of State
for the Colonies.

SPECIFICATION.—Clause 21.

The following description of works is given for the information of intending Contractors, but both this and the plans are to be accepted in the terms of Clause 21 of the General Specification.

Ceylon Government Railway,
Chief Resident Engineer's Office,
Colombo, Ceylon, 9th August, 1867.

Description of works to be done and executed in and for the construction of a branch line to the Ceylon Government Railway extending from the station at Péradeniya to a point near to the town of Gampola, and to be called the Gampola Branch.

The plans and drawings accompanying this description, are numbered consecutively from 1 to 26. The Tender for the execution of the works is to be based generally upon them, subject to such minor deviations or alterations as may, in the progress of the work, be deemed necessary by the Engineer.

Drawing No. 1 is a plan of the Railway, shewing centre line and line of cross sections.

Drawing No. 2 is a trial section, constructed from the survey lines and cross sections.

The permanent section has progressed to some extent, and shews so small a difference from the trial section, that the latter may be considered as a very near approximation to the truth.

Drawings Numbers 3, 4, 5, 6, 7, 8, 9, and 10 are cross sections of the ground taken at every important point on the line where the nature of the ground changes.

Drawing No. 11 gives details of rectangular culverts, 2 feet high by 18 inches wide, of brickwork with stone slab covering, and section, if constructed in rough masonry; details of 2 feet barrel

RAILWAY EXTENSION.

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Sub-Enclosure No. 2, in Enclosure No. 1 in No. 6.

Gampola Railway Contract.

culvert in brickwork, and of 3 feet barrel culvert in brickwork and in masonry; also details of 30 and 60 inch iron pipes, with faces of masonry, the aprons being pitched with rough stones and protected from wash by a system of sheet piling.

Drawing No. 12 gives details of 3 feet open drains, of 10 feet arch in 12 feet embankment, and details of 25 feet iron girder bridge, with invert of brickwork.

Drawing No. 13 gives details of viaducts, namely one over the Nanoo Oya, of spans of 40 feet each; one over the Gele Oya of spans of 40 feet each, and one at 4 miles 50 chains of spans of 40 feet each. To be constructed in brickwork.

Drawing No. 14 is a block plan of the station at the Gampola end of the branch line.

Drawing No. 15 is a plan of the Passenger shed.

Drawing No. 16 gives details of Cantilever supporting roof over carriage approach, at entrance to Booking offices.

Drawing No. 16*a* details of roof over Passenger shed.

Drawing No. 17 is a plan of double Goods shed connected by a Goods office.

Drawing No. 18 shews weigh-house and weighing machine.

Drawing No. 19 gives details of iron water tank, 25 feet square, supported on top of Engine house.

Drawing No. 20 is a plan of Porter's lodge and gates at entrance to the Goods yard.

Drawing No. 21 is a plan of water closets and urinals for passengers.

Drawing No. 22 gives details of Fuel stage, and of carriage and horse dock.

Drawing No. 23 is a plan of Station Master's house and godowns.

Drawing No. 24 gives details of permanent way construction, cross section of cuttings and embankments at formation level, and details of ballasting.

Drawing No. 25 is plan of engine running shed.

Drawing No. 26 details of 40 feet turn-table.

The quantities of earthworks, as given in the annexed schedule, are based on the assumption, that formation width shall be 20 feet throughout, the slopes of embankments being $1\frac{1}{2}$ to 1 and of cuttings $\frac{1}{2}$ to 1, but these ratios will be increased or diminished as may be found necessary when the ground is opened.

The whole area of the station will be cleared and levelled to formation level, excepting the approach road and the Goods yard, which will be levelled to rail level.

Retaining walls must be constructed with a battered face, the inclination being 1 to 6, and the width of their bases must not be less than $\frac{1}{3}$ of their heights. The back of the wall to be perpendicular.

The Station Master's house (drawing No. 23) will be built on the high ground in front of the station, the floor level to be 18 inches above the surrounding ground, the wall to be of brickwork, plastered with lime plaster inside and outside, and whitewashed. The floor is to be laid with asphalte, $\frac{1}{2}$" thick, on a concrete bed, 6" thick, or on a floor of brick-on-edge in mortar.

The pillars of the verandahs are to be of bricks plastered with lime plaster. All doors and windows, and other wood work, are to be in teak wood. The doors and windows to be well varnished and the roof framings, wall plates, &c., painted. The rafters and laths are to be whitewashed with white clay.

The covering of the roof is to be of the best ordinary tiles laid 500 to a square.

The laths to be of Mendora wood, 2" wide × $\frac{1}{2}$" thick, and laid 2" apart.

The rafters to be of palmyra of a section not less than 4" × 2", and must be free from pith or soft wood. All ironwork in the roof is to be well painted before it is fixed.

The Passenger shed (drawing No. 15) is to be constructed of brickwork. The walls are to be whitewashed inside, and neatly pointed outside. The roof is to be of galvanized and corrugated iron sheets of 20 B. W. gauge in thickness, supported on iron trusses placed at intervals of 10 feet, apart, the shoes at each end of the trusses are to be secured by 7/8" holding down bolts 4 feet 6 inches long, two to each shoe, and the shoes are to be well bedded on stone blocks, 14" square and 6" thick.

The gables of the roof are to be filled in with pannelled screens of wood.

The roof is to be of iron, constructed according to drawing. It is to be painted inside and tarred on the outside. The sheets are to be fixed to the purlins by clips—shewn in detail on same plan; two clips are required to each sheet, except the top ones, which require 4 to each sheet.

The platform inside the shed, the floors of offices and other rooms, are to be 20 inches above rail level, asphalted $\frac{1}{2}$" thick on a brick on-edge floor. The platform kerb is to be of wood 12" × 3" in section and secured to the wall at intervals of 6 feet by $\frac{3}{4}$" bolts, 2 feet long. The outside platform is to have a brick wall coped with a stone kerb, 12" × 4" in section, and the surface is to be covered with well screened gravel. The ramps at either end are to fall with an inclination of 1 in 10 and the back of the platform to slope at $1\frac{1}{2}$ to 1.

The offices for booking passengers and parcels, the Lamp room, Guards' room, Telegraph and Station Master's offices, and the Ladies' waiting rooms, are to be built up to a height of 10 feet, and ceiled over with *extra* strong galvanized iron wire netting, well secured to wooden ceiling joists; the meshes of the netting must not exceed 2" diameter. Ticket counters and lamp shelves, and fittings to offices and waiting rooms, will be necessary. A water-closet, with small slate cistern and a Jenning's pan, is to be set up in the Ladies' waiting room, and two similar water-closets, also a semi-circular urinal, are to be set up in building (drawing No. 21) at the end of the Passenger shed, 3" pipes are to be laid, as shewn on block plan, for flushing the water-closets and urinals. All carpenters' work to be of teak, varnished; the doors to be panelled, and windows glazed.

The permanent way through shed to be on longitudinal sleeper, and the floor of the shed to be paved with brick-on-edge.

The Cantilevers over the carriage approach are to be of cast iron, placed 10 feet apart, intermediate purlins of T iron, the top and bottom purlins of teak; the filling in at the ends, and the curtain boards at the eaves of the roof, are also to be of teak varnished.

The corrugated iron covering is to be painted inside and tarred outside.

The spare line of rails through the Passenger shed will afford accommodation for running carriages.

The approach to the Passenger shed, and the whole of the Goods yard, must be well MacAdamed, 6″ thick; after being well stamped and consolidated. The station ground is to be well and thoroughly provided with all necessary surface drains and sewers, and sufficient sand traps, street and minor gratings, and pipes, to ensure the speedy and efficient drainage of the ground. The upper and outer surface of all drains to be in no case higher than formation level.

Sixteen ordinary switches, one of which will form the junction with main line, and one three-throw switches, with their crossings, guard rails, &c., complete, are to be laid where required. The switches to be same design as those employed in the main line, and the crossings to be Ransome's patent chilled cast iron.

The engine turn-table is to be 40 feet diameter.

The carriage turn-table is to be of wrought iron, 15 feet diameter. Hennet's and Spinke's patent.

The traverser is to be Dunn's patent wrought iron carriage traverser, with 50 feet of pathway.

The water tank is be 20 feet square and 4 feet deep, exclusive of the angle pieces, and must contain 13,000 gallons.

It is to be set up on the top of the engine-house. The engine is required to be fixed inside the house, and pump to be fixed down the well, which will probably be 50 feet deep. The engine and pump must be capable of raising, from the bottom of the well to the tank, 7,500 gallons per hour.

Six inch and three inch mains are required to be laid, as shewn in block plan; they must be complete, with all the necessary sluice valves, &c.

The well is required to be sufficiently deep, to ensure an adequate supply of water for the pump; it must not be less than six feet diameter inside whatever lining may be required.

The Goods sheds are to be built of brickwork in lime mortar, with large folding paled gates at the ends and battened doors at the sides. They are to have tiled roofs supported as shewn and described on the drawing. The platforms are to be 3′ 6″ high above rail level, and to be asphalted ½″ thick on a concrete bed 6 inches thick, made of road metal, clean gravel, sand and lime; the kerbs of the platform are to be of teak wood, 12″×3″, secured by ¾″ bolts, 2 feet long, every 6 feet.

The warehouse cranes to be Medhurst's patent, to lift two tons. The pillars round which the cranes work are to be fixed to the longitudinal runner of the roof, and to be well braced by timber braces, having knees and bolts at the intersection of the tie beams and braces. All the timber-work is to be tarred over.

The floor of the Goods Office is to be asphalted on a brick-on-edge floor. The doors and windows to be painted, also the roof works; all doors and windows must have proper and sufficient fastenings, the door to the Office having a strong iron lock, and also a large Chubb's patent padlock.

Two waggon weighing machines, "Pooley's Patent," are required, namely one at either end of the Goods' sheds; the foundations are to be of a permanent and stable nature. The graduated levers are to be housed in, as shewn in on the plan (drawing No. 18), the roof of which is to be constructed as follows:—cross joists, 4″×2″, are to be fixed at 12″ inches apart, centre to centre; on these are laid paving tiles, 12″ square, in two courses, breaking joint one with the other; the whole is then plastered with cement plaster, having a slight rise in the centre.

The wall of the ticket platform is to be of the same section as outside platform of the Passenger shed, but the coping to be of brick-on-edge in cement, with the arris well rounded off.

The horse and carriage dock is required as shewn on drawing No. 22. The two sides of the horse dock must be fenced, to prevent accident to restive horses.

The engine running shed (drawing No. 25) is to be built of brickwork, neatly pointed outside and whitewashed inside. The walls to be of the dimensions given on the plans; the roofing is to consist of galvanized corrugated sheet iron of 20 B. W. G. thickness, secured by clips of galvanized iron to the purlins and wrought iron framed principals, which are to be 10 feet apart, and secured in a similar manner to that described in the Passenger shed. The shed is to be quite open at the ends. The pits are to be flat-bottomed, slightly inclined to one side, and inclined from the middle to the end so as to ensure good drainage; glazed earthenware pipes are to be used for conveying the water from the pits.

An Office for Locomotive Assistant, and a room for the Drivers to be built as a lean to the shed. The roofs of these are to be tiled.

The water crane is required to be 9 feet 6 from the centre of pillar to centre of hose at end of the jib. The jib itself must be of thin sheet copper, so as not to require a counterpoise. The orifice of the jib is to be 6″ diameter, and the water is to be commanded by a sluice cock near the foot of the pillar. The crane, when not in use, must stand with the jib parallel to the line of rails.

The crane in the Goods yard is to be a ten ton standard crane; it is to be erected on ample foundations, to have a powerful break, and the jib is to be of wrought iron.

Three hundred and seventy lineal yards of brick walling is required to fence in the station on the road side. It must be of the section shewn on drawing No. 20. The pilasters to occur every three yards—the wall will be plastered on both sides with lime mortar, the coping being plastered with Portland cement weathered and throated.

The fuel stage and shed (drawing No. 22) is to be of brickwork, whitewashed inside and outside, the roof to be of galvanized corrugated iron of 20 B. W. G. thickness, secured by clips, and supported by T iron rafters, resting on a row of pillars in front and the wall at the back.

The platform wall is to be coped with brick-on-edge in cement, and the floor to be asphalted.

The gates of the Goods yard are to be teak wood. The porter's lodge and the pillars to be brickwork, plastered outside and whitewashed inside.

The lamps shewn on top of gate-posts are to be constructed for burning oil. Stones for hinge-pins of gate 18 × 12×6.

GUILFORD L. MOLESWORTH.

RAILWAY EXTENSION.

CORRESPONDENCE.

Sub-Enclosure No. 3, in Enclosure No. 1 in No. 6.

The Chief Resident Engineer to the Director - General, Ceylon Railway.

Sub-Enclosure No. 3, in Enclosure No. 1. in No. 6.

The CHIEF RESIDENT ENGINEER to DIRECTOR-GENERAL, Ceylon Railway.

Ceylon Government Railway,
Chief Resident Engineer's Office,
Colombo, 27th April, 1867.

SIR,

I HAVE the honor to forward to you a tender for the construction of the Gampola Branch Railway, sent in by Mr. McBean, one of the Assistant Engineers on the Staff of the Ceylon Government Railway.

In doing so, it may be desirable that I should make a brief comparison between the several estimates,—that furnished to Government by you, and the tenders sent in by the Contractor and Mr. McBean.

Your estimate, in addition to all the items included in both these tenders, provided for the following,—

Stations, exclusive of Points and Crossings	£13,100
Administration and Engineering	7,000
Land	5,160
Rolling Stock and Machinery	17,000
Telegraph	400
Contingencies on the four last items	2,990
Proportion of contingencies on Stations	1,310
Total	£46,960

which, deducted from £139,750, the gross total of your estimate, leaves £92,790.

Mr. Faviell's revised tender amounted to £106,000, which he subsequently increased to £106,870 by the addition of £870. for providing and fixing points and crossings.

Mr. McBean's tender, which includes points and crossings, amounts to £100,136.

A comparison of the three yields the following results:—

Mr. Faviell	£106,870	Mr. McBean	£100,136
Mr. Molesworth	92,790	Mr. Molesworth	92,790
Excess	£14,080	Excess	£7,346

Mr. Faviell	£106,870
Mr. McBean	100,136
Excess	£6,734

It will thus be seen, that Mr. McBean's estimate is nearly mid-way between yours and Mr. Faviell's, being £7,346 greater than the former, and £6,734 less than the latter; and it becomes a question for consideration, whether, if either of these tenders is to be accepted. so small a difference as £6,734 is sufficient to determine the acceptance of the lesser one.

There are two other points of difference which I think it right to notice.

Mr. Faviell will undertake to complete the line in two years from the time when he is put in possession of the land; Mr. McBean undertakes to do the same in 18 months.

Mr. Faviell's proposal for maintenance is to be at the rate of £200 per mile for one year, or £280 per mile per annum for five years.

Mr. McBean proposes to maintain and uphold the line for five years, for £2,666 (this to include all station buildings, sidings, and all extra work) which, for 7¼ miles of main line, and 1 mile and 30 chains of sidings, amounts to £309 per mile per annum. I am inclined to think, however, that Mr. Faviell has not included the maintenance of station buildings in his tender, and I have accordingly written to him to ascertain the fact.

On the whole, I am of opinion that the Contractor's tender is not an unreasonable one; and bearing in mind the experience he has already had of work in the Island, and the advantage of having a large working staff and plant at hand, quite prepared to commence immediate operations, as well as the determination and energy he has already shewn during the construction of the main line under circumstances of no ordinary difficulty, I hope, if it be merely a question as to the saving of some six or seven thousand pounds, that His Excellency the Governor will be pleased, by the acceptance of this tender, to give to the Contractor any trifling benefit that may accrue therefrom.

I have, &c.,
(Signed) DEVONSHER J. SCOTT,
Chief Resident Engineer.

The DIRECTOR-GENERAL,
Ceylon Government Railway.

P.S.—Since writing the above, I have ascertained from Mr. Faviell, that his "tender of £280 per mile for 5 years for the Gampola branch, is for 7¼ miles of main line, and includes stations and sidings."

This, for 7¼ miles, amounts to £2,030 per annum for maintenance, and, when compared with Mr. McBean's tender of £2,666 per annum, shews an excess of £636 per annum in the tender of the latter gentleman over that of the former, which would amount, in five years, to £3,180.

(Signed) DEVONSHER J. SCOTT,
Chief Resident Engineer.

Sub-Enclosure No. 3, in Enclosure No. 1 in No. 6.
The Chief Resident Engineer to the Director - General, Ceylon Railway.

Enclosure No. 2 in No. 6.

Enclosure No. 2 in No. 6.
The Director-General of the Ceylon Railway, to the Hon'ble the Colonial Secretary.

The DIRECTOR-GENERAL, Ceylon Railway, to the Hon'ble the COLONIAL SECRETARY.

No. 13.

Ceylon Railway,
Colombo, 11th January, 1867.

SIR,

I HAVE the honor to forward to you Mr. Faviell's tender for the Railway from Péradeniya to Gampola.

I have, &c.,
GUILFORD L. MOLESWORTH,
Director-General.

The Hon'ble
The COLONIAL SECRETARY,
Colombo.

Sub-Enclosure No. 1, in Enclosure No. 2 in No. 6.

Sub-Enclosure No. 1, in Enclosure No. 2 in No. 6.
The Director-General of the Ceylon Railway, to the Contractor.

The DIRECTOR-GENERAL, Ceylon Railway, to the CONTRACTOR.

No. B/490.

Ceylon Railway,
Colombo, 31st August, 1866.

SIR,

I HAVE the honor to inform you that the trial survey of the Gampola Railway has been completed, and that the plans, sections, and other documents are open to your inspection in case you should be disposed to tender for the construction for the Railway.

2. Your tender should be based on the same conditions as those upon which your contract for the Railway from Colombo to Kandy is based, with such modifications as may be necessary in the case of the Gampola Railway.

3. The principal modifications appear to be:—

1st. A reduction in the amount of security.
2nd. A reduction in the amount of the Guarantee Fund.
3rd. Advances for plant unnecessary.
4th. Time for completion of the Railway to be shortened, and the penalty for non-completion reduced.
5th. The clauses referring to taking over the property of the late Company unnecessary.
6th. Advances for sending out staff unnecessary.
7th. A different amount per mile per annum for maintenance.

4th. The alterations would appear to be:—

1st. The adoption of the ordinary Indian 5 strand galvanized wire cord fencing, instead of the live fencing.
2nd. The sleepers to be of the best Baltic fir, creosoted, similar in every respect to those hitherto supplied for the Ceylon Railway.
3rd. The contract to include 2½ miles of sidings, including rails, fittings, fastenings, sleepers, steel points, switch boxes (where necessary switch locks), steel crossings, and laying, complete.
Measurement to be taken from point to point or to end of siding.
4th. Stations work of every description, as specified, to be included in the guaranteed contract, and any work not specified or fairly implied, to be charged as extra to the contract.
5th. A schedule of prices, of a form approved of by the Engineer, should accompany the contract.
6th. All extra work to be paid for at the schedule of prices, and in the event of any work not coming within the schedule, the prime cost to be charged.
7th. The Contractor to take over at prime cost all surplus materials and works from the stations of the Ceylon Railway which, in the opinion of the Engineer, may be used for the stations of the Gampola line, and the cost of such materials and works shall be credited by the Contractor to the stations account of the Ceylon Railway.

RAILWAY EXTENSION.

CORRESPONDENCE.

Sub-Enclosure No. 1, in Enclosure No. 2 in No. 6. Mr. Molesworth to the Contractor, Ceylon Railway.

8th. The maintenance of all extra work to be included in the cost of general maintenance.

9th. The curves are not to be sharper than 20 chains' radius, except at Pérádeniya and Gampola Stations, and near the 4th mile, where two curves of 10 chains' radius will be allowed.

10th. The gradients are not to be steeper than 1 in 200.

5th. It is probable that the Civil Engineer and Commissioner of Roads will be asked to submit an estimate for the construction, based upon the quantities calculated by me.

I have, &c.,
(Signed) GUILFORD L. MOLESWORTH,
Director-General.

The CONTRACTOR,
Ceylon Railway.

Sub-Enclosure No. 2, in Enclosure No. 2 in No. 6. The Director-General of the Ceylon Railway, to the Contractor.

Sub-Enclosure No. 2, in Enclosure No. 2 in No. 6.

The DIRECTOR-GENERAL, Ceylon Railway, to the CONTRACTOR.

No. B/529.

Ceylon Railway,
Colombo, 3rd December, 1866.

SIR,

WITH reference to my letter of the 31st August, I have the honor to inform you, that having carefully reconsidered the question of the Gampola line, I have decided to select a new terminus near the 12th mile-stone on the road from Kandy to Gampola, instead of adopting the terminus near the Gampola Suspension Bridge. I have also made some deviations, and as I learn that the excessive flood has not occurred since 1837, and that in the meantime the country has been cleared of jungle and the outlet of the Mahavella Ganga below Gatembe has been widened, I have reduced the formation height in some places. The plans and sections, with these alterations, are open to your inspection, and the enclosed list of quantities can be verified by you in any way you think fit. I also enclose a rough draft of specification for stations, for your remarks.

I have, &c.,
(Signed) GUILFORD L. MOLESWORTH,
Director-General.

The CONTRACTOR,
Ceylon Railway.

Sub-Enclosure No. 3, in Enclosure No. 2 in No. 6. Mr. Faviell to the Director-General of the Ceylon Railway.

Sub-Enclosure No. 3, in Enclosure No. 2 in No. 6.

Mr. FAVIELL to the DIRECTOR-GENERAL, Ceylon Railway.

Colombo, January 10th, 1867.

SIR,

I HAVE the honor to acknowledge the receipt of your letter dated the 3rd of December, 1866, and I now beg to inform you that I am willing to construct a Railway from Pérádeniya to Gampola, 7¼ miles, according to the plans and sections prepared by you, and upon which my estimate is based, for the sum of one hundred and forty-two thousand pounds (£142,000).

This estimate includes the station at Gampola, and the construction of a complete Railway, except land, rolling stock, and telegraph.

I have, &c.
(Signed) W. F. FAVIELL.

G. L. MOLESWORTH, Esq.,
Director-General,
Ceylon Railway.

Enclosure No. 3 in No. 6. The Hon'ble the Colonial Secretary to the Director-General, Ceylon Railway.

Enclosure No. 3 in No. 6.

The Hon'ble the COLONIAL SECRETARY to the DIRECTOR-GENERAL, Ceylon Railway.

No 15.

Colombo, 21st January, 1867.

SIR,

I HAVE laid before the Governor and the Executive Council your letter of the 11th instant, No. 13, forwarding Mr. Faviell's tender for the construction of the Railway from Pérádeniya to Gampola.

The items omitted in Mr. Faviell's tender are administration, land, rolling stock, telegraph, and contingencies. Adding to his tender (£142,000) the sums estimated by you for these items (£32,550), according to the revised estimate submitted by you, the total cost of the construction of the Railway will amount to £174,550; whereas your estimate, including these items, amounts to £139,750, and that of the Civil Engineer to £112,601.

Administration ...	£7,000
Land ...	5,160
Rolling stock	17,000
Telegraph	400
Contingencies	2,990
	£32,550

The Government would not, under any circumstances, undertake the construction of the Railway if it were to cost so large a sum as that for which Mr. Faviell has tendered, and the question of giving the work on contract to him cannot therefore be entertained unless he is willing to reconsider his tender.

I have, &c.,
(Signed) JAMES SWAN

The DIRECTOR-GENERAL,
Ceylon Railway.

Enclosure No. 4 in No. 6.

Mr. FAVIELL to the CHIEF RESIDENT ENGINEER, Ceylon Railway.

Mr. Faviell to the Chief Resident Engineer, Ceylon Railway. Enclosure No. 4 in No. 6.

Ceylon Railway,
Colombo, March 2nd, 1867.

SIR,

I HAVE the honor to acknowledge the receipt of your letter of the 28th ultimo, enclosing copy of letter dated January 21st, 1867, from the Government of Ceylon to the Director-General, in reference to my tender for the construction of the Gampola branch.

It would appear that, excluding the items of administration, land, rolling stock, telegraph, and contingencies, amounting to £32,550, the estimate of the Director-General is £107,200, or £34,800 less than my tender. I cannot understand how this large difference should arise, unless it is partly in the item for stations, which is more difficult to estimate in a lump sum than the rest of the contract; and, for this reason, I think it would be better if the station work was executed upon a schedule of prices, to be agreed upon when all the plans for the same are completed.

In this case I should be willing to construct the Railway complete, except the Gampola Station. for the sum of one hundred and six thousand pounds (£106,000).

I have now had some experience in the cost of work and value of labour in Ceylon, and my tender is based upon actual payments.

I do not anticipate a reduction in the price of materials and labour; on the contrary, I am convinced that, as the numerous public works proposed in India are brought into operation, a further advance will take place.

It is necessary that I should retain in this country a large and responsible staff for the maintenance of the Railway from Colombo to Kandy; were it not for this circumstance my tender would be considerably higher.

I have, &c.,
(Signed) W. F. FAVIELL.

The CHIEF RESIDENT ENGINEER,
Ceylon Railway.

Enclosure No. 5 in No. 6.

Mr. FAVIELL to the CHIEF RESIDENT ENGINEER, Ceylon Railway.

Enclosure No. 5 in No. 6. Mr. Faviell to the Chief Resident Engineer, Ceylon Railway.

Kadugannáwa, March 5th, 1867.

SIR,

IN answer to your letter of yesterday, I have to inform you, that the providing and fixing of the points and crossings, was not included in my tender for the Gampola branch, and the charge extra for the same will be £870.

* * * * * *

I have, &c.,
(Signed) W. F. FAVIELL.

The CHIEF RESIDENT ENGINEER,
Ceylon Railway.

Enclosure No. 6 in No. 6.

TENDER for the Gampola Branch Railway, by Mr. MCBEAN.

Enclosure No. 6 in No. 6. Tender for the Gampola Branch Railway.

I, SIMON MCBEAN, do hereby offer to construct the Gampola Branch Railway, 7 miles 22 chains in length, according to plans, sections, and specifications furnished, for the sum of one hundred thousand one hundred and thirty-six pounds sterling (£100,136), which sum is to include the following, viz:—

All earthwork, bridges and culverts,
Retaining walls, permanent way, 8 miles 50 chains,
Fencing 14½ miles, four strand galvanized wire,
Upkeep of roads, clearing jungle,
Diversions of roads and streams,
3 Signals (2 distant and 1 station),
Footpath crossings, and
17 sets points and crossings, one of which will be a three throw;

and in addition to the foregoing, I hereby offer to construct and furnish all station works of every description, on a fixed schedule of prices, hereafter to be agreed upon.

And I further agree, in the event of the acceptance of this tender, to complete all of the foregoing works within eighteen months after the contract had been signed, and possession of the land has been obtained; and I hereby offer, in the event of my obtaining the contract for the construction of the said Railway, to maintain and uphold it for the period of five years after its completion, for the annual sum of £2,666, this sum to include station buildings, sidings, and all extra works.

(Signed) SIMON MCBEAN.

Dated Péradeniya, this 22nd day of April, 1867.

Enclosure No. 7 in No. 6.

Enclosure No. 7 in No. 6

* Estimate of the Director General.—*See page* 18
Estimate of Civil Engineer *do.* 20

RAILWAY EXTENSION.

CORRESPONDENCE.

No. 7.

No. 7.

The DUKE OF BUCKINGHAM AND CHANDOS to Governor Sir HERCULES ROBINSON.

CEYLON.
No. 57.

Downing Street,
3rd March, 1868.

The Duke of Buckingham and Chandos to Governor Sir Hercules Robinson.

SIR,

I HAVE considered with the Lord Commissioners of the Treasury your Despatch No. 193 dated the 24th August, 1867, submitting plans and sections of the proposed branch Railway to Gampola, also estimates and tenders, and reporting your wish to construct this Railway through the agency of the Public Works' Department, which, considering the high amount of the tenders, you recommend as preferable to the employment of a Contractor. Correspondence on the subject of your Despatch has also passed with the Crown Agents, copies of which I annex for your information.

C. O. to Agents, October 16th, 1867. Agents to C. O., November 13th, 1867.

2. You estimate the total cost of this projected work at about £120,000, and the profits from traffic at about 6¾ per cent. per annum on this outlay; and it appears that you propose to obtain the requisite funds for construction by taking a sum of £60,000, or thereabouts, which you expect to be available from the unexpended proceeds of the Debentures issued on account of the main line, a sum of £50,000 from the Colonial balances, and the remainder of the £120,000, or sum required, from current revenue. Her Majesty's Government do not find any sufficient grounds for assuming that the work can be effected for a less sum than the estimate of Mr. Molesworth, who has now had much experience of the cost of work in the Colony, viz., £139,750, and, indeed, I think it unsafe to assume that the work will cost less than £150,000, the estimate according to Mr. Faviell's tender being £153,830; nor do I think it safe to assume that the profits from traffic will be so large as are estimated, the line being only 7 or 8 miles in length, and probably too short to admit of a high special tariff being enforced with advantage. It further appears impossible, so far as present information goes, to rely on the supposition that any large sum will remain out of the proceeds of the present Debentures, after the sum of £75,000 is set aside, with which your Despatches state that the Sinking Fund ought to commence in order to admit of its meeting the liability of £100,000 falling on the Fund in November, 1868, for the redemption of the £100,000 of Debentures issued under the Ordinance of 1860. There appears to be no *data* at present for estimating, with any confidence, what surplus will be exhibited on the closing of the Construction Account to the 1st January, 1868, over and above this £75,000; and on the whole it seems safest to suppose, for the purpose of the present instructions, that there will not be such a surplus at all.

3. Her Majesty's Government are further unwilling that the available Cash balances of your Government, amounting to about £83,000 according to the latest information from you, should be reduced, except under very special circumstances, below £50,000.

4. Her Majesty's Government, however, are unwilling to oppose obstacles to the prosecution of a project to which your Government seems to attach much importance, and are therefore willing that it should be submitted to the Legislative Council, the funds being obtained as follows:—

(1.) From balances, to the extent of £33,000.

(2.) From fresh issue of Debentures, to an extent not exceeding £100,000; your Government to be at liberty to go to the full extent of this issue in the event of there proving to be no substantial surplus of proceeds of present Debentures, after setting aside £75,000 above mentioned; otherwise, the issue to be reduced by the extent of such surplus as may be ascertained (or thereabouts).

(3.) From current revenue, for whatever sum may be further required. The new Debentures to bear a rate of interest not exceeding 6 per cent., and their redemption to rank after that of the present Debentures, as a charge on the Sinking Fund.

5. Your Government will, however, be at liberty, if the available balance should prove to amount to a larger sum than £83,000, on striking the balance of assets and liabilities for the 1st January, 1868, to increase the contribution to the work from balances beyond £33,000, in substitution for debt or contribution from current revenue, provided a clear balance of £50,000 is left free. You will understand that this amount of available balance is in future always to be reserved, and not appropriated without previous sanction from the Secretary of State, your Government being free to appropriate from time to time any available balance in excess of that sum in the same manner as ordinary revenue is appropriated without waiting for such sanction, such appropriation of balances to be made by specific vote of the Legislative Council, embodied as usual in an Ordinance, on estimates of the works and services duly submitted to that Council.

6. Her Majesty's Government must further make it a condition, that the construction of the Railway should be effected by Contract, like that from Colombo to Kandy, if this can be done on reasonable terms. They are averse to the plan of employing the Public Works' Department, which would prove, they are convinced, the reverse of economical.

7. I shall be glad to be informed whether your Government would be favorable to proceeding with the project under these altered conditions; and if so, what steps you would

wish to be taken in this country in the matter of letting the works (fresh tenders might be called for, or, without doing so, a negotiation might be entered into with Mr. Faviell). It will also be advisable that you should report your views as to the rate of interest to be fixed for the new Debentures, and the term for which they are to run, and whether you would propose that the account of interest on the debt, of working expenses and receipts for this branch Railway, when completed, should be kept separate, or merged in the Working and Sinking Fund Account of the main line. The accounts of the branch, pending construction, must obviously be kept entirely separate from that Main Line Account.

I have, &c.,
BUCKINGHAM AND CHANDOS.

Governor
Sir H. G. R. ROBINSON,
&c., &c., &c.

Enclosure No. 1 in No. 7.

Mr. ELLIOT to the CROWN AGENTS FOR THE COLONIES.

Downing Street,
16th October, 1867.

GENTLEMEN,

I AM directed by the Duke of Buckingham and Chandos to annex, for your Report, and that of the Consulting Engineer for Ceylon—Mr. Gregory, C. E.—a copy of a Despatch, with its enclosures, received from the Governor of Ceylon, submitting tenders and proposals for the construction of the projected Railway to Gampola. You are requested to state in your report, among other points, how far the latest estimates bear out the Governor's former supposition, to which he appears to adhere in the present Despatch, that there will be a surplus of Construction funds from the issue of Debentures, equal to about one-half of the cost of the works. You will not fail to observe that the Governor is very desirous to receive an early decision on this question.

I am, &c.,
(Signed) T. F. ELLIOT.

The CROWN AGENTS
FOR THE COLONIES.

Enclosure No. 2 in No. 7.

Mr. JULYAN to Sir F. ROGERS.

Spring Gardens,
13th November, 1867.

SIR,

IN compliance with the directions contained in your letter of the 16th ultimo, I have now the honor to forward, for the information of the Duke of Buckingham and Chandos, a further report from the Consulting Engineer on the proposed branch Railway from Gampola to Péradeniya; and with respect to the financial part of the subject, to which particular attention is drawn in the 2nd paragraph of your letter, I now beg to enclose an estimate shewing the state of the Main line Construction account, from which it would appear that a balance of about £111,000 will remain after the final instalment of the loan shall have been realized, and the work completed.

It should be understood, however, that the Crown Agents have not the means of ascertaining what the local receipts and expenditure have been since the 30th June last, no returns for subsequent periods having reached them. The above balance will consequently be influenced to the extent of the difference between such receipts and expenditure for the last half of the present year; but so far as they can form any opinion on the question, the Crown Agents see no reason to doubt the correctness of the Governor's estimates.

The balance, however, whether more or less, seems to have been intended, by Ordinances No. 7 of 1864 and No. 10 of 1866, to form the nucleus of a Sinking Fund, and if the holders of the Debentures already issued are not supposed to possess any interest in such balance, as forming part of their security, it may still be found necessary to amend the appropriation clause of the first named Ordinance, in order legally to divert any part thereof to another purpose.

I much regret that, through an oversight in this Office, some unnecessary delay has occurred in reporting on this subject, and as it is particularly desired by Sir Hercules Robinson, that the decision of His Grace should arrive in Ceylon before the meetings of Council terminate, I would suggest, if I may be permitted to do so, that such decision should be communicated to the Governor by telegraph. This, it is believed, may be the more easily done, inasmuch as Mr. Gregory's report is, in all essential points, a confirmation of that which preceded it, and of which the Governor is already in possession.

I have, &c.,
(Signed) P. G. JULYAN.

Sir F. ROGERS, Bart.,
&c., &c., &c.

P. S.—The enclosures to Sir H. Robinson's Despatch, No. 193 of the 24th August last, are herewith returned, as requested.

RAILWAY EXTENSION.

CORRESPONDENCE.

Sub-Enclosure No. 1, in Enclosure No. 2 in No. 7.
Mr. Gregory to the Crown Agents for the Colonies.

Sub-Enclosure No. 1, in Enclosure No. 2 in No. 7.

Mr. GREGORY to the CROWN AGENTS FOR THE COLONIES.

CEYLON RAILWAY.

Gampola Branch.

1, Delahay Street, Westminster,
13th November, 1867.

GENTLEMEN,

I return herewith the papers upon which my Report of the 19th March was based, and those transmitted with your letter of the 11th instant; and in compliance with the instructions of that letter I have the honor to submit the conclusions to which I have been led by a consideration of the questions raised in His Excellency Sir Hercules Robinson's Despatch No. 193 of August 24th, 1867, assisted by the materials which accompanied that Despatch.

2. I have nothing to add to the opinions I expressed in my former Report on the probable cost of the branch, and it would appear that the main question now for consideration, in the event of the Secretary of State sanctioning the construction of the branch line, is, the mode in which it should be executed.

3. It appears that the circumstances which would affect this question have undergone some change, even if Mr. Faviell and Mr. McBean were still willing to execute the work by contract at the prices proposed by them. I am strongly of opinion that there is no probability of obtaining in this country, at a lower rate than the tenders sent in, fresh tenders for the execution of the work from substantial and thoroughly reliable Contractors; for any such tenders would necessarily be made somewhat in the dark, and prudent Contractors would probably be influenced by the known difficulties in the labour market, which have so much affected Mr. Faviell in the main line contract. Again, much time would be lost in obtaining tenders, and there appear to be many reasons, why, if this branch is to be constructed, the work should be commenced with as little delay as possible.

4. As a general rule, I confess to an instinctive indisposition to recommend the construction of works of any extent, otherwise than by contract; but the Colony of Ceylon appears to be in an exceptional position, from the existence of a large and well-trained force of Government workmen and labourers, whose experience on bridges and road works would have prepared them to a great extent for Railway works.

5. I have been strongly impressed with the observations in the 13th paragraph of the Governor's Despatch No. 193, intimating that the present would be a favourable time for this work being executed by the Public Works' Department, from the fact that a large number of the pioneers would be free from such works by the end of the year, and that the labour market is likely to be well supplied; and I submit that, under these circumstances, it would be desirable to give effect to His Excellency's recommendation that the Gampola branch should be executed by the Public Works' Department.

6. The amount of work which would be executed on the Gampola branch by the Pioneer force, if this view should be carried out, would not be great in comparison with the Public Works already constructed, or in course of construction, by that force, so that no great additional elements of responsibility would be involved, and there would be an obvious advantage in increasing the training and capacity of the corps; and so, not only improving a portion of the native population, but giving the Colony greater power to meet its own future wants by means at its own disposal.

7. At the same time, I feel it right to point out that the success of the operation would mainly depend on its being directed by thoroughly competent Officers. This necessity would, I feel sure, be equally present to your minds, and, in the event of Mr. Molesworth remaining at the Head of the Public Works' Department, I should look forward to the result with great confidence.

8. The plans and drawings, specifications, and other particulars of the proposed works, bear marks of careful consideration. It is unnecessary that I should here offer any particular remarks upon them, but if the Secretary of State should decide that the Gampola branch should be constructed, I submit that further reference will have to be made to those papers, with the view of full consideration of the details, and correspondence thereon with the Engineers in Ceylon.

I have, &c,
(Signed) CHARLES HUTTON GREGORY
Consulting Engineer.

The CROWN AGENTS
FOR THE COLONIES,
Spring Gardens, S. W.

Sub-Enclosure No. 2, in Enclosure No. 2 in No. 7.

CEYLON RAILWAY.

APPROXIMATE STATEMENT of the Receipts and Expenditure in relation to the Construction and Equipment of the Ceylon Railway under Mr. FAVIELL'S Contract.—Enclosure to Mr. JULYAN'S letter.

RECEIPTS.	
Receipts in the Colony to the 30th June, 1867.	
Contributions from Surples Balances...	£250,000
Do. General Revenue...	109,065
Do. out of Export Duty	282,243
Balance of Railway Company's Account	18,758
Value of Materials taken over by the Contractor	22,622
Miscellaneous Receipts	7,757
Receipts in England to the 31st October, 1867.	
Proceeds of the sale of Debentures ...	600,000
Premium derived thereon ...	52,907
Further issue during November, 1867	100,000
Estimated premium thereon ...	7,000
Value of Materials taken over by the Contractor	13,753
Miscellaneous Receipts	9,174
Mr. Faviell, repayment of advance ...	12,500
	£1,489,779

EXPENDITURE.		
By Mr. Faviell's Contract sum ...		£873,039
„ Do. additional payment.		58,000
„ Payments in Ceylon beyond the Contract to 30th June, 1867...		144,889
„ Payments in England beyond the Contract to 31st October, 1867		164,352
„ Debenture Interest to ditto ...		92,563
„ Do. to 15th November, 1867		21,000
„ Additional Rolling Stock ...		25,000
		1,378,843
Unappropriated Balance in England and Celylon ...		110,936
		£1,489,779

(Signed) P. G. JULYAN,
Crown Agent.

Offices of the Crown Agents for the Colonies,
Spring Gardens, London,
12th November, 1867.

No. 8.

No. 8. Governor Sir H. Robinson to His Grace the Duke of Buckingham and Chandos.

Governor Sir H. ROBINSON to His Grace the DUKE OF BUCKINGHAM AND CHANDOS.

No. 122.
Miscellaneous.

The Pavilion, Kandy,
7th June, 1868.

MY LORD DUKE,

I HAVE received Your Grace's Despatch No. 57 of the 3rd of March last, relative to the proposed Branch Railway to Gampola, in which you express your desire to be informed, whether this Government would be favorable to proceeding with the project under the altered conditions laid down in Your Grace's Despatch.

2. I have accordingly consulted my Executive Council upon the subject, and I now enclose an extract from their Minutes, from which it will be seen that this Government is not favorable to proceeding with the Gampola Railway at present. 20th May, 1868.

3. If proceeded with, it would be necessary to provide the funds for this project, under the terms laid down, from the following sources:—

1. Any balance of the Sinking Fund over £75,000.
2. Any surplus balances in excess of £50,000.
3. By the issue of debentures, to the extent of £100,000.
4. From general revenue for any further sum which might be required.

4. The amount available for the Sinking Fund on the 1st January last is found to be, in round numbers, £125,000, and if this question could have been brought before the Legislative Council when I wrote my Despatch of August, 1867, I have no doubt that they would readily have consented to devote £50,000 out of the monies available for that Fund to the construction of the Railway; but since the close of the last Session so strong a feeling against the Export duties has been raised, that the Council would not now allow the Sinking Fund to be touched, its reduction by £50,000 being equivalent to the continuation of the Export duties for a further period of one year. But it has been suggested to me by a remark in Mr Julyan's letter to Sir F. Rogers of 13th November, 1867, paragraph 3, that the debenture holders have an interest in the whole of the balance of Railway funds in hand at the close of the Construction account, and, therefore, even if the Legislative Council were willing to make the appropriation, it would not, I think, on reconsideration, be advisable to allow them to do so, as this Government has invariably resisted all

Enclosure of Secretary of State's Despatch, No. 57 of the 3rd March, 1868.

RAILWAY EXTENSION.

CORRESPONDENCE.

No. 8.
Governor Sir H. Robinson to His Grace the Duke of Buckingham and Chandos.

attempts to obtain the reduction or abolition of the Export duties, on the ground that it would be a breach of faith on the part of the Colony to make a change which would in any way affect the security held by the debenture holders under Ordinance No 7 of 1864; and this argument is equally applicable to the balance of the Construction account, which has been transferred to the Sinking Fund.

5. As regards the second source from which it is proposed to raise the funds required, it will be seen from my Despatch No. 121 by this mail, that there are now no surplus balances available for this purpose.

6. The third source proposed is by the issue of debentures to the extent of £100,000, but it is doubtful whether a further sum could be raised on reasonable terms by means of debentures, as, in view of the strong feeling against the continuance of the Export duties, to which I have adverted above, the Legislative Council would not consent to allow those duties to be hypothecated as part of the security to be given by the Colony.

7. The fourth source proposed is from current revenue for whatever further sum may be required, but the prospects of the revenue for the current year are so unfavorable, that it would not be possible to devote any portion of the general revenue to the extension of the Railway. The Land revenue has fallen off to a large extent, owing to the failure of the early rice harvest, and the long drought during the past months of this year render the prospects of the August harvest most unpromising. Under other heads there has been a large falling off, owing to the disturbance of the inland carrying trade of the Colony by the opening of the Railway, which has practically absorbed, for the present, the profits hitherto accruing from that trade to the general revenue; the large decrease in the cart traffic causing a very considerable reduction in the receipts from cart and arrack licenses, and from tolls on the Kandy road. I have no doubt that the revenue will recover itself in time, but for the present the opening of the Railway is a cause of loss to the general revenue, the net profits of the Railway being credited to the Sinking Fund.

8. For these reasons it appears to myself and my Council impossible to proceed at present with the extension of the Railway from Péradeniya to Gampola.

I have, &c.,
H. G. R. ROBINSON.

His Grace
The DUKE OF BUCKINGHAM AND CHANDOS,
&c., &c., &c.

Enclosure in No. 8.

Enclosure in No. 8.

EXTRACT from the Minutes of a Meeting of the Executive Council, held at Nuwara Eliya on Wednesday, the 20th day of May, 1868.

Present.

His Excellency SIR HERCULES G. R. ROBINSON, Kt.

The Hon'ble Major-General S. J. HODGSON.
The Hon'ble W. C. GIBSON,
The Hon'ble R. F. MORGAN,
The Hon'ble F. B. TEMPLER,
The Hon'ble R. J. CALLANDER.

Read Despatch from the Secretary of State, No. 57, of March 3rd, 1868, acknowledging Governor's Despatch submitting plans and sections of the proposed Branch Railway to Gampola, and estimates and tenders for the construction of the Railway, stating the terms on which Her Majesty's Government would sanction the undertaking, and requesting information whether the Ceylon Government would be favorable to proceeding with the project under the altered conditions suggested, and, if so, what steps the Governor would wish to be taken in England in the matter of letting the works.

Resolved,—That having regard to the altered circumstances of the Colony since the proposal last went forward, the Council is unable to recommend the Railway being proceeded with on the conditions specified by the Secretary of State.

II.

ESTIMATED

RECEIPTS AND PROFIT,

ON A

RAILWAY

FROM PÉRÁDENIYA TO NÁWALAPIṬIYA.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
PRINTED BY WILLIAM SKEEN, GOVERNMENT PRINTER, CEYLON.

1870.

RAILWAY EXTENSION.

ESTIMATED RECEIPTS and PROFIT on a Railway from Pe'ra'deniya to Gampola, 7 miles, and from Gampola to Na'walapitiya, 10 miles.—Total 17 miles.

Pérádeniya to Gampola 7 miles.

		£
27,375 tons "Up" at 4*d.* per ton per mile, 7 miles = 2*s.* 4*d.*	=	3,194
30,425 „ "Down" „ 3½*d.* „ „ 7 „ = 2*s.* 0½*d.*	=	3,106
Passengers, Parcels, &c., £225 per mile, for 7 miles	=	1,575
	Total...	£7,875

Gampola to Náwalapitiya 10 miles.

13,400 tons "Up" at 4*d.* per ton per mile, 10 miles = 3*s.* 4*d.*	= £2,233		
15,400 „ "Down" „ 3½*d.* „ „ 10 „ = 2*s.* 11*d.*	= 2,246		
Passengers, Parcels, &c., £112 per mile, for 10 „	= 1,120		
	Total...	5,599	
		5,599	
			£13,474
Deduct Working Expenses, 40 per cent...			5,389
Net Profit on 17 miles extension...			£8,085

Main Line.—Pérádeniya to Colombo.

7,375 tons "Up" at 22*s.* 0*d.*	= £8,112	
8,425 „ "Down" „ 17*s.* 9*d.*	= 7,477	
Passengers, Parcels, &c.	2,000	
	17,589	
Deduct Working Expenses, 40 per cent.	7,032	
Net profit on Main Line ...		£10,557
Saving on upkeep of road from Pérádeniya to Náwalapitiya		2,040
Total Profit on extension to Náwalapitiya		**£20,682**

RAILWAY EXTENSION.

Explanatory Notes on Estimate.

EXPLANATORY NOTES on Estimate of Railway Traffic to Na'walapitiya.

The traffic of the Péradeniya Station in 1870 will probably exceed 23,000 tons "up," and 25,000 tons "down." Of this it is estimated that 3,000 tons each way belong to the Deltota District, and would continue to use the Péradeniya Station—leaving 20,000 tons "up" and 22,000 tons "down," which may be considered the traffic to and from Gampola, which at present is carried on the main line to and from Péradeniya Station.

Experience upon the main line has proved the rapidity with which traffic develops under the conditions of cheap and certain transport, especially in the item of manure, which in its turn leads to the increased productiveness of the soil. In 1868, the first year of through working between Colombo and Kandy, the gross tonnage of goods on the main line was 116,176 tons, whereas in 1870 it is estimated at 161,000 tons, or an increase of nearly 40 per cent. A very careful return has been prepared, shewing the present condition and future prospects of every existing estate in the Náwalapitiya, Dimbula, Dik Oya, and Kotmalé districts—a summary of which is annexed. From this it will be seen, that the development which will be created in these districts alone by cheap transport, is estimated at 7,375 tons "up" and 8,425 tons "down." This estimated development is less than 38 per cent. on the existing Gampola traffic of the Péradeniya Station; and it is therefore thought a very moderate calculation to include it in the probable traffic between those two places, which is thus raised to 27,375 tons "up" and 30,425 tons "down."

Marked A

As the line beyond Gampola would lose the traffic which comes in at Gampola by the Nuwara Eliya road from the districts of Pusselláwa, Pundal Oya, Ramboda, &c., as well as the local Gampola traffic, the estimate has been prepared so as to shew the probable traffic on each section of the proposed extension. The Districts which would use the Náwalapitiya Station are, Ambagamuwa, Yac Dessa, Kotmalé, Dimbula, Dik Oya, and Maskeliya, the prospects of which are shewn in Statement A. before referred to; and, considering that the present rate of cart hire for these Districts is 1*s.* 11*d.* per ton per mile "up," and 1*s.* 3*d.*, per ton per mile "down," and that the Railway extension rates are estimated,* as on the main line, at 4*d* "up" and 3½*d.* "down," it is thought that the estimated traffic at Náwalapitiya of 13,400 tons "up" and 15,400 "down" (including development) is under, rather than over, the mark. In this estimate it will be seen from Statement A., that no allowance whatever is made for the large forest reserves in Maskeliya, of which 4,047 acres have already been sold, or for the 5,000 acres of Crown land still available in Dimbula—or for the proportion of the Dolosbáge traffic, which may possibly join the line at Pasbáge. Nor is the possibility of bringing the Haputalé and Badulla produce to Náwalapitiya by a wire Tram-way taken into account This last measure alone, if feasible, would at once throw nearly 25,000 tons additional traffic on the line.

Statement B

The passenger, parcel, and miscellaneous traffic is estimated at £225 per mile between Péradeniya and Gampola, and at £112 a mile between Gampola and Náwalapitiya. These rates have been taken because they represent one-fourth of the estimated goods traffic between those places, being the proportion which the passenger traffic bears to the goods traffic upon the main line. The passenger, parcel, and miscellaneous traffic on the main line is estimated for this year at £537 per mile, and the goods traffic at about £2,200 per mile. The goods traffic on the Gampola extension is estimated at £900 per mile, and on the Náwalapitiya extension at £450 per mile.

The precise extent to which the main line would benefit by the branch to Náwalapitiya is a point which it is difficult to determine. But the branch has fairly a claim to be credited with (1) the proportion of the existing traffic, which, but for the extension, would not find its way to the main line at all, and (2) with the development of traffic which would be created by the facilities afforded for cheap and certain transport.

There is first, then, the development on the Gampola extension. The Coffee districts which would use the Gampola Station, are Gampola, part of Dolosbáge, Pusellawa, Pundul Oya, and Ramboda, containing together about 20,500 acres under coffee cultivation. There is not much new land to be opened in these districts, and the saving in transport on an extension of the Railway for only eight miles to Gampola would scarcely be sufficient to stimulate any considerable development of existing cultivation. Still there would doubtless be some development of traffic in these districts, although there is no data at present available upon which a reliable estimate can be framed. There is next

* The average rates to and from Péradeniya on the main line are "up" 3·94*d.*, "down" 3·40*d.*

the Náwalapitiya development, which is estimated by Return A. at 15,800 tons, without counting the Maskeliya Valley and the reserves in Dimbula. There is also the proportion of the Dik Oya traffic, which, without the extension, would not make use of the main line, but would be carried by the Kelani river from Yatiyantota. And if the Badulla and Haputalé traffic were brought to Náwalapitiya, it would be nearly all clear gain to the main line, as it would mostly be diverted from the Ratnapura road. It is thought safe, however, in the accompanying estimate, to omit altogether all profit to the main line which is either uncertain, or which there is not data to estimate, and to take credit only for the mileage proportion on the Náwalapitiya development in goods traffic, estimated at 15,800 tons, and £2,000 for increased receipts from passengers, parcels, &c.

The saving in the upkeep of the existing road from Pérádeniya to Náwalapitiya should also, in fairness, be taken into consideration. The average cost of maintenance for the 19 miles for five years has been £3,400 a year. The tolls for 1870 have realized but £600, leaving a net cost to general revenue of £2,800. The maintenance of the road after the opening of the Railway would probably be under £40 per mile, so that the saving would amount, as shewn in the estimate, to over £2,000 a year.

The estimate, framed on these principles, shews a total profit on the extension to Náwalapitiya of over £20,600, which would be nearly 10 per cent. on a capital outlay of £210,000. But if Maskeliya and the Wilderness of the Peak should ever be developed to the extent which seems possible, and the Badulla and Haputalé traffic brought to the Náwalapitiya Station, the profit on the proposed branch line would probably be more than double the amount named.

Viewed therefore as a mere investment, the extension promises to be a safe and remunerative speculation. But apart from the direct return to the Government for the capital outlay, important results to both the public and individuals would be sure to follow from the undertaking. The saving to the Planters in the neighbourhoods of Gampola and Náwalapitiya upon the cart rates of the existing traffic alone, without any development, would be over £26,000 a year; whilst the wealth of the country would be largely increased, not only by the opening up of new land, but by the greater productiveness of existing estates, through the facilities which would be afforded for higher cultivation. Statement C.

A.

District.	Extent of Estates.	Extent now under Coffee Cultivation	Present Produce of Coffee in Cwts.	Probable extent of Cultivation with cheap Transport.	Probable Crop with cheap Transport
	Acres.	Acres	Cwts.	Acres	Cwts
Dimbula.	29,030	12,538	55,600	24,807	167,208
Ambagamuwa	15,571	5,471	19,000	7,500	27,400
Yae Dessa	3,550	490	1,750	490	1,750
Kotmalé.....	11,809	6,973	34,750	8,860	49,750
Maskeliya	4,047	819	- -	—	—
Dik Oya	15,061	6,245	28,400	12,826	62,000
	79,068	32,536	20)139,500	54,483	20)308,088
			tons 6,975		tons 15,404

	Tons.		Tons.
The "Up" traffic of Rice and Manure, &c., is estimated at present at	6,025	future at ..	13,400
The "Down" do. as above.....	6,975	do ...	15,400
	13,000		28,800
			13,000
			15,800 tons.

Probable development of Traffic, exclusive of Maskeliya

	Tons.
"Up".....	7,375
"Down"... ..	8,425
Tons ..	15,800

RAILWAY EXTENSION.

Explanatory Notes on Estimate.

B.

APPROXIMATE Rates of Cart Hire at per ton per mile "Up" and "Down" on the following roads:—

			s.	d.		s.	d.
Pérádeniya.—Gampola	.....	Average 1s. 7d.	1	4	Average 1s. 2¼d.	1	0½
„ Pusselláwa	.....		1	5¾		1	0¼
„ Nuwara Eliya	.....		1	6⅝		1	0⅛
„ Badulla	.....		1	1		1	3
„ Náwalapitiya	.....		1	10¼		1	2¾
„ Dimbula	.....		1	10		1	3⅛
„ Dikoya	.....		2	0¼		1	2⅛
			s.	d.		s.	d.
Kandy.—Mátalé	.....		1	0	.....	1	0⅓
„ Kallibokka	.....		1	4¼	.....	0	9½
„ Knuckles	.....		1	2⅝	.....	1	1
„ Rangalla	.....		1	9⅞	.....	1	5½
„ Galmal Oya	.....		1	3⅝	.....	1	2¾

Kandy, 7th July, 1870.

C.

ESTIMATED saving which would accrue to the Planters by a Branch Railway to Náwalapitiya on the present rates between Náwalapitiya and Pérádeniya, and Gampola and Pérádeniya.

	£	s.	d.	£	s.	d.	£	s.	d.
Present rates Náwalapitiya traffic.									
6,000 tons up, 19 miles, at 1s. 11d.,	10,925	0	0						
7,000 „ down do. at 1s. 3½d.	8,589	11	8						
				19,514	11	8			
Rates by proposed Railway Extension.									
6,000 tons up, 17 miles, at 4d. .	1,700	0	0						
7,000 „ down do. at 3½d. .	1,735	8	4						
				3,435	8	4			
							16,079	3	4
				Saving £—			16,079	3	4
Present rates Gampola traffic (less Náwalapitiya traffic as above).									
14,000 tons, 8 miles up, at 1s. 4d. .	7,466	13	4						
15,000 „ do. down, at 1s. 0½d.	6,250	0	0						
				13,716	13	4			
Rates by Railway Extension.									
14,000 tons, 7 miles up, at 4d. .	1,633	6	8						
15,000 „ do. down, at 3½d.	1,531	5	0						
				3,164	11	8			
							10,552	1	8
				Saving £—			10,552	1	8
				Total saving to Planters £—			26,631	5	0

III.

REPORT

ON

WIRE TRAMWAYS.

BY

GUILFORD L. MOLESWORTH, Esq.,

DIRECTOR OF PUBLIC WORKS.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

PRINTED BY WILLIAM SKEEN, GOVERNMENT PRINTER, CEYLON.

1870.

WIRE TRAMWAYS.

REPORT.

From the Director of Public Works to the Hon'ble the Colonial Secretary, Ceylon.

London, August 31st, 1870.

Sir,

In accordance with the wishes of His Excellency the Governor, contained in a telegram instructing me to report officially on the suitability of the Wire Tramway for the mountain districts of Ceylon, I have the honor to report that, on the receipt of these instructions, I at once placed myself in communication with Mr. John Gordon, who kindly afforded me every facility for inspecting the Tramway in question. The line erected on the Brighton Downs is experimental and, consequently, of a temporary character; its details are somewhat defective, and capable of improvement in many respects. In fact, Mr. Gordon, who accompanied me in my inspection, pointed out several improvements which would be made in any permanent structure hereafter to be erected. The length of line constructed is about five miles, or a total length of 10 miles of rope, but of this only about half was working during my visit.

WIRE TRAMWAYS. Report.

In that length there are several steep gradients and three very sharp curves. The rope used is of steel wire, and is two inches in circumference. The supports average about 70 or 80 yards apart, but in one place I noticed an unsupported length of about 170 yards.

The number of boxes averaged about 30 per mile, and the speed at the highest was a little more than 4½ miles per hour. The boxes were each charged with loads of about half a hundredweight when I arrived, but that load was gradually increased to one hundredweight, exclusive of the weight of the box itself.

Judging from the dimensions of the engine, its speed, and behaviour under this work, and from the pressure of the steam, the power consumed under this rate could not have been less than 35 horse-power.

The delivery would be equivalent to a traffic of about 70 tons each way in a day of 10 hours, or 140 tons both ways.

With improvement in the details, I believe there would be no difficulty in increasing the speed to 5 or even to 6 miles an hour, but I think that 5 miles would practically be found to be the limit for economical reasons; beyond that speed the wear and tear would probably increase greatly.

There are two points in which any line erected in the mountain districts of Ceylon would probably differ from the experimental line.

1st.—The supports would in many cases be of far greater magnitude, to enable the traffic to clear obstacles and to cross the steep ravines which are so numerous in Ceylon.

2nd.—The continuous inclines would in some cases be far longer than those on the trial line.

The first difference is simply a question of extra strength and cost. The second is a more serious question, as in some cases the whole length worked by one engine might be on one ascending incline. Practically speaking, an up and down line such as that on the Brighton Downs is almost equivalent to a level line, because the loads descending balance those ascending.

It may be argued in the case I have supposed, that the down may balance the up traffic. This is true to a certain extent, if an equal down traffic is to be obtained; but, as a general rule, the character of the Ceylon traffic does not admit of this. In any case the strain on the rope on one long continuous incline, whether balanced or no, would be far greater than on an up and down line. I mention these points not as an insuperable objection, but merely to point out that there will probably be difficulties in the actual line which do not exist in the experimental one.

When such cases arise, I believe they may be met by judicious arrangement, though of course by some increase in expense.

WIRE TRAMWAYS.

Report.

The total length erected on the Brighton Downs is, in my opinion, too great to be worked from the engine in one direction. I think that from 2½ to 3 miles on each side of the engine (and even less in the case of continuous inclines) will be found to be the outside length that can be worked satisfactorily and permanently. This would in ordinary cases give an engine station every 5 or 6 miles.

The greatest defect in the experimental line is the want of means for periodically oiling the bearings of the pullies. This is not of much consequence on the Downs, where there is no jungle to be kept down, because a man can easily climb the standards for the purpose of oiling the bearings, but the density of the jungle in Ceylon would in many places render this difficult and expensive. Still this is matter of detail, and arrangements may be made to meet the difficulty.

It will also be necessary that a permanent line in Ceylon should be furnished with some self-acting apparatus for taking up any slack in the rope, whether caused by the sudden changes of the temperature or by the variations of the traffic; but this again is a matter of detail not difficult of arrangement.

The boxes must also be constructed in such a manner as to protect their contents from the sun and rain, and this will probably increase their weight somewhat. The bearings for a permanent line will, I think, require some improvement and some means of adjustment for wear; there is a considerable jar and concussion when the boxes pass the supports, but this is capable of material diminution by alteration in the details of the pullies, &c.

I presume that it is the intention of His Excellency the Governor, that my Report should refer more particularly to the line of Wire Tramway which it is proposed to construct between Badulla and Kandy.

I regret that I have not access to data connected with the traffic of the district and the features of the proposed line, to enable me to report fully on this subject.

So far as my recollections of the country serve me I doubt whether the line could be constructed through that district for less than £1,700 or £1,800 per mile. I believe the cost of working such a line would be from 6*d.* to 8*d.* per ton per mile, according to the proportion in which the up traffic could be worked in combination with the down. I presume that the total up and down traffic of the Udupusselláwa, Badulla, Héwa Eliya, and Madulsema districts will not exceed 20,000 tons per annum, so that the average would not be more than from 30 to 35 tons per day each way, though the maximum one way in the height of the coffee season might double the average (or amount to 60 or 70 tons).

A Wire Tramway with 30 boxes per mile capable of carrying 1 cwt. in each box, and travelling at 5 miles an hour, could deliver 75 tons each way in a day of 10 hours, and in cases of emergency there would be no difficulty in working for more than 10 hours per day.

In conclusion, I think that the Wire Tramway is decidedly suitable for many of the mountain districts of Ceylon, as by judicious arrangement a means of transport may be constructed at a low rate; and even though the cost of working per mile may be expensive, the distance saved in the mileage will practically reduce the rate when the total length is compared with that of a road between the same points.

In all cases, however, such an undertaking requires to be carefully considered in its details, and in stating that I consider it suitable in some cases, I wish to guard against the supposition that I recommend it for universal adoption. Each locality requires special consideration. In some districts a first class Railway is the most suitable means of transport; in others a *light* Railway; whilst in some a Road or a Wire Tramway may have its advantages; and though I am not in a position to report fully on the question of the line between Badulla and Kandy, I am of opinion that it is an instance in which the Wire Tramway may be adopted with advantage. A light Railway is impracticable, and would not be justified by the traffic. A road winding up the ravines would be very long and costly. The present road viâ Nuwara Eliya is very circuitous and trying to the cattle, and the saving effected in the length by the adoption of a Wire Tramway would be immense.

So far as engineering difficulties are concerned, I see no objection to the introduction of the Wire Tramway between Badulla and Kandy. How far it would succeed as a Commercial undertaking is a point on which I am not in a position to express an opinion; but the present unsatisfactory state of the Cart traffic between Badulla and Kandy renders it imperative to substitute some mechanical contrivance in lieu of cattle, and no other means of transport except the Wire Tramway appears to be applicable to the district.

The observations I have made above will enable you to determine whether the traffic of the district will justify the outlay necessary for the erection of a Wire Tramway.

I have, &c.,

GUILFORD L. MOLESWORTH.

IV.

REPORTS

ON

LIGHT RAILWAYS.

BY

GUILFORD L. MOLESWORTH, ESQ.,

DIRECTOR OF PUBLIC WORKS.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

PRINTED BY WILLIAM SKEEN, GOVERNMENT PRINTER, CEYLON.

1870.

SCHEDULE.

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REPORTS

ON

LIGHT RAILWAYS.

No. 1.

From the DIRECTOR-GENERAL, CEYLON RAILWAY, to the Hon'ble the COLONIAL SECRETARY.

Ceylon Government Railway,
Kadugannáwa, 15th February, 1866.

SIR,

IN returning the documents connected with Light Railways and Tramways in India, I have the honor to submit the following remarks for the information of His Excellency the Governor.

REPORTS ON LIGHT RAILWAYS.

No 1.
From the Director-General, Ceylon Railway, to the Hon'ble the Colonial Secretary.

1. The facts to be extracted from the documents go far to confirm the opinions I have already expressed upon the subject, whilst discussing the proposition of the Ceylon Company Limited for the construction of a system of light branches, as feeders to this Railway.

2. I pointed out to the Committee, that Light Railways were only admissible for districts in which the features of the country preclude the adoption of a Railway of the ordinary gauge, or in which anything but a light line would not be justified by the nature of the traffic

3. I also urged, that in the case of the Gampola branch line, the difference of cost between the light and ordinary system would be but trifling, and that the accessories necessitated by the light system would make the total cost of a Light Railway nearly equal to, if not greater than, that of a Railway of the ordinary gauge and construction; whilst, at the same time, the light system would entail the serious disadvantage of a break of gauge.

4. On reference to Colonel Strachey's letter, it will be seen that the Government of India is of opinion, that "the construction of light and cheap Railways is undoubtedly desirable where none others are to be got;" that "nothing should be done to stimulate the absorption of roads as Railway formation roads;" and that "it is very doubtful whether Railway traffic and ordinary Cart traffic can go on side by side on the same road."

5. The idea of a Railway constructed on the light system, at a cost of only £1,900 per mile, appears at the first glance to be attractive, when contrasted with the cost of the India Railways; on close inspection, however, the contrast gradually diminishes. The cost per mile, when investigated (see Captain Williams' report, clause 18), is increased from £1,900 to £3,000, and probably more; this is exclusive of land, earthworks, bridges, culverts, ballasting, &c. The cost of these items, when deducted from the total cost of the Great Southern of India, leaves only £4,700 as the cost of a first class Railway, contrasted with £3,000, or probably more, for a very insufficient one. It does not appear that Captain Williams has deducted the cost of ballast, which would probably further reduce the cost of the Great Southern of India from £4,700 to £4,200, or £4,300.

6. The adoption of the light system in India appears to me to be a mistake; it amounts, in point of fact, to this: Government constructs the Railway, provides the land, and gives a subvention of 125 Rs. per mile; the Company provides and lays down an inefficient permanent way, stations, and rolling stock, and reaps all the profits of the undertaking. The main features of the system, as far as I can ascertain them from the documents before me, appear to be as follows:—

Gauge, 4 ft.	Weight of Engines, 14 tons.
Rails, 35 lbs. per yard (fished).	Carriages and Trucks, 50, or 60, ft. long.
Sleepers, 2 teak slabs, 12 in. × 15 in. × 1½ in. thick.	Number of wheels per carriage, 3 pairs.
	One pair of wheels provided with radial axle boxes.
Gauge bars of teak, 4 in. × 1½ in.	Speed, 15 miles per hour.
Distance apart of sleepers, 2 ft. 3 in.	Maximum load per axle, 7 tons.
Depth of Ballast, 8 or 9 inches.	

7. The way, if rightly described in the reports, can scarcely be called a "permanent way"; it is inferior to many Contractors' temporary ways, and cannot be expected to stand satisfactorily, nor would it, in my opinion, be safe to travel upon such a track, even at a rate of 15 miles per hour, after the line had been in operation for some time.

REPORTS ON LIGHT RAILWAYS.

No. 1.
The Director-General, Ceylon Railway, to the Hon'ble the Colonial Secretary.

8. The essential novelty of the system (see Captain Williams' report, clause 21) appears to be based on erroneous principles; being neither more nor less than the adoption of the small powerless engines of the light system, combined with a rolling stock even more heavy and unmanageable than is necessitated by the *heavy* system; this has been done in order to avoid what is termed "an inconsistency in the heavy system," in loading the wheels of the vehicles to about one-half the weight only that is put upon the engine wheels.

9. A little reflection will shew that this "inconsistency" is only ideal. Unless the weight on the engine wheels be considerable, sufficient adhesion cannot be obtained to enable it to draw heavy trains; but, even though it be necessary that one vehicle on the train should have wheels loaded heavily, it does not follow that every other should require the same. The faults inherent in both systems have been adopted, in order to avoid this imaginary "inconsistency."

10. Far from reducing the "unproductive rolling load," (see Williams' report, clause 24) the adoption of the cumbersome rolling stock will tend to increase it, especially when it is necessary to leave light loads at way-side stations, or to make an addition to a train for a slight overplus of either passengers or goods. Large vehicles will also be found unmanageable for shunting and handling at minor stations, without steam power or a large force of porters.

11. It must not be forgotten, that *heavy loads*, rather than high speeds, cause the necessity for *heavy engines*, and that though high speeds may be attained by light engines with the same facility as by heavy engines, *heavy trains* can only be conveyed by the *heavy engines*.

12. The system of light engines is by no means new. Railways were originally constructed with permanent way and engines even lighter than those lately adopted in India; but experience has gradually led to the introduction of more powerful, and consequently, more weighty, engines; and the permanent way has, in the same proportion, been increased in strength to meet the demands for heavy engines.

At various epochs in the history of Railways attempts have been made to introduce afresh the system of light engines; and partizans have not been wanting to advocate their use and give them a trial, which has invariably resulted in a return to heavy engines.

13. It appears, that on the extension of the light system to the Oudh and Rohilcund Railway, the gauge has been increased to 5 ft. 6 in., the ordinary Indian gauge (see Williams' report, clause 15), and that the projector of the light system contemplates the employment of heavy and full-power "locomotives" (see Hodgson's report, clause 25), so that a return to the ordinary Railway system appears to be in progress.

14. There is no doubt that low speed is an important element in the economical working of Railways, when it can be adopted; but it should not necessitate the construction of the Railways in such a manner that higher speeds are unsafe; such a system involves a principle of insecurity.

15. Although the rate of 40 and 45 miles has been attained in trial-trips on the Ceylon Railway, and I should have no hesitation in running at a rate of 60 miles per hour if an emergency should demand it, the speed of the trains has, on motives of economy, been limited to 20 miles per hour. In Ceylon there is no need of high speeds, and I believe that 20 miles per hour will be found to be the most desirable rate in every respect.

16. In England, where competing lines abound, the case is different—high speeds are absolutely necessary; for a slight reduction of speed on a Railway would have the effect of transferring its traffic to a rival Railway.

17. In making the foregoing remarks, I wish it to be distinctly understood that I do not urge them to the total exclusion of light lines in Ceylon. I am however, strongly of opinion, that nothing is to be gained by following out the system adopted in India.

18. The working expenses, per ton carried, will be much greater on light than on ordinary Railways, and the break of gauge is always attended with serious drawbacks; nevertheless, it is possible that with the extension of Railways in Ceylon it may be found desirable to construct light lines. The districts in which such light lines may be desirable, are obviously those in which the natural features of the country are too abrupt to be rounded by ordinary Railway curves, except at a cost which would preclude the construction of a Railway. On a regular, bold, or undulating line of country the slight difference between the cost of light and heavy lines would not compensate for the disadvantages of the light system.

19. If a light line were adopted in Ceylon, I should recommend a gauge more narrow, carriages lighter and less cumbrous, and a permanent way more carefully and substantially constructed, than those adopted in India.

20. I should recommend, as the basis for Light Railways, small transverse sleepers; rails, 35 lbs. per yd. fished; gauge, 3 ft.; vehicles constructed for carrying two tons each; passenger carriages in proportion; wheel base, about 5 or 6 ft.; engines not exceeding 10 tons in weight; engine wheels 3 ft. diam., 4 wheels coupled; speed, about 10 or 12 miles per hour.

21. Such a system however, should not be admitted in any particular district, without careful consideration of the local circumstances which would justify its adoption.

Numerous cases have come within my observation, in which the hasty adoption of a false principle has been attended with serious results, not only in the inconveniences arising from the system itself, but from the fact that it has acted as a bar to the introduction of the correct principle. I refer more particularly to the establishment of Tramways in England, in places where Railways should have been originally laid down. The drawbacks, not apparent at first, have forced themselves upon the attention of those engaged in working them, and their ultimate conversion into Railways has only been accomplished after years of expensive working, and by a large sacrifice of capital, in works, permanent way, and rolling stock; nor have the Railways thus converted ever been so efficient as they would have been had they been originally laid out as Railways.

I have, &c.,
GUILFORD L. MOLESWORTH,
Director-General.

The Hon'ble
The COLONIAL SECRETARY,
Colombo.

No. 2.

The DIRECTOR-GENERAL, CEYLON RAILWAY, to the Hon'ble the COLONIAL SECRETARY.

No. 114. Ceylon Railway,
Colombo, 17th April, 1866.

SIR,

With reference to my letter of the 15th of February last, on the subject of Light Railways, I have the honor to enclose, for the information of His Excellency the Governor, the following extracts taken from the "*Bombay Builder*" for March, 1866, which publishes some papers received by the Bombay Government in reply to a request, on the part of that Government, for information respecting the adoption of a Light Railway "such as that from Arconum to Conjeveram, as a cheap and effective substitute for ordinary Railways."

Extract from a Letter of the Agent and Manager of the Madras Railway.

"My own views coincide very much with those expressed by Mr. Smart; and the fatal mistake, as I consider it to have been, which the Tramway Company made, in adopting a different gauge between Arconum and Conjeveram to that of the Railway, has been exemplified in their Agent's recent negociation with the Governor of Pondicherry, in which it was made *a sine quâ non* that the proposed extension of the Tramway from Conjeveram to that sea-port should be constructed of the recognized Indian gauge. This arrangement, if carried out, will necessitate the reconstruction of the line from Arconum to Conjeveram."

Extract from Letter of the Chief Resident Engineer of the Madras Railway.

"The economy of constructing Light Railways is very doubtful; it is generally admitted that the gauge of all Indian lines should be uniform. The Indian Tramway Company have already discovered their error in adopting a narrow gauge, and are prepared, I understand, in future undertakings to use the Indian gauge of 5 feet 6 inches, although this step will render their present rolling stock useless. With a wider gauge they must introduce heavier rolling stock, and heavier rolling stock will necessitate a more substantial permanent way. The difference in the cost of masonry works, capable of bearing the traffic of an ordinary Railway and a Light Railway, is practicably inappreciable, the gauge being the same in both. The cuttings, embankments, and ballast, must be the same; the fencing, station signals, and all other appointments must be the same; and the same wages must be paid to the officers and servants. The only item therefore in which a reduction can be effected, is permanent way, and that only to the extent of £1,000 per mile (the permanent way of the Madras Railway costs, in round numbers, £3,000 per mile; that of the Indian Tramway Company, £2,000); and if the permanent way be less substantial than that of an ordinary Railway, the cost of maintenance and renewals will be increased in a corresponding degree. The weight of the rolling stock must be diminished, and with it the carrying capacity of the line. If the promoters of Light Railways would fairly take these facts into consideration, we should hear no more of such projects."

Extract from a Letter of the Traffic Manager of the Madras Railway.

"Though a very indifferent substitute for an ordinary Railway, it is unquestionably effective as an auxiliary, in comparison with a common road; but its usefulness is considerably diminished by the difference of gauge, and the necessity to break bulk; and I think it will be found, in working a heavy goods traffic, that the cost of haulage will be little, if at all less, than that of an ordinary Railway, whilst the disadvantages inseparable from a break of gauge will always be felt, and must prejudice traffic."

I have &c.,
GUILFORD L. MOLESWORTH,
Director General.

The Hon'ble
The COLONIAL SECRETARY,
Colombo.

REPORTS ON LIGHT RAILWAYS.

No. 3.
The Director of Public Works to the Hon'ble the Colonial Secretary.

No. 3.

From the DIRECTOR OF PUBLIC WORKS to the Hon'ble the COLONIAL SECRETARY.

London, 23rd September, 1870.

Light Railways.

SIR,

I OBSERVE that the publication of some articles in the London "*Times*," on the subject of Light Railways, has excited considerable discussion and interest in Ceylon, and it has occurred to me that the Government of Ceylon may desire the expression of my views on the subject.

The Festiniog Railway (the gauge of which is only 2 feet) is the Railway to which particular reference has been made in the articles to which I have alluded, and as its success has been unquestionable, I will confine my remarks more particularly to it.

I have not as yet been able to visit this Railway, but I intend to do so before I leave England; and should I then observe any fact that may modify my views, I will again communicate them to you.

Meanwhile I will accept as correct the data furnished by the supporters of the system.

The advantages of the light system, as adopted on the Festiniog line, appear to be as follows:—

1st.—The working expenses are only 44½ per cent. of the receipts, whereas on English lines of ordinary gauge they average 48 per cent.

2nd.—The Festiniog line yields 29½ per cent. interest on the original capital, whereas the English lines yield only from 5 or 6 per cent. to nil.

3rd.—The dead weight of rolling stock on the Festiniog line is only ⅓ of the weight carried, whilst on English lines the dead load of a similar freight is more than one-half the weight of the freight.

4th.—The gauge being narrow, there is an immense saving in the first construction of the line.

5th.—The loads being comparatively small, the wear and tear is immensely reduced.

Such striking advantages would appear to speak for themselves, and to establish conclusively the superiority of the Festiniog gauge over the ordinary gauge adopted in England. But, before I can fully adopt such a conclusion, it becomes necessary to analyse the facts carefully, to ascertain whether there are any exceptional circumstances connected with the Festiniog Railway; and, if so, how these exceptional circumstances affect the results above given. In fact, whether the advantages above enumerated are wholly and solely due to the adoption of the exceptionally narrow gauge on the Festiniog Railway.

The first point that strikes the attention is, that notwithstanding these advantages the expenditure per train mile is nearly double that of the average of English Railways, and more than double that of the average of Irish Railways (on which the rates of labor would more nearly resemble those of a remote Welsh district, like that of the Festiniog Railway).

The principal features that appear to be exceptional on the Festiniog Railway, are, that the traffic is almost exclusively composed of slates; that the rate charged for the carriage of slates is at least double that ordinarily charged for slates in English Railways; that the traffic is almost entirely down hill, and will descend by its own weight on easy gradients, requiring locomotive power for but little more than the haulage of the empty trucks back again; that this circumstance has enabled the traffic to be worked for a great many years with remunerative results by horses alone; and that the profits of the line, thus worked, have been sufficient to enable the proprietors to expend from these profits a sum of £50,000, in converting it into a locomotive line.

Now, let us see how these facts affect a comparison with English lines of the ordinary gauge.

I will take the advantages claimed for the Festiniog line seriatim, in the order in which I have given them above.

1st. The working expenses are stated to be 44½ per cent. of the receipts; but on examination of the financial statement, it will be seen that for the year ended June, 1869, the receipts amounted to £23,676, whilst the actual expenditure has been £13,053, so that the expenditure has actually been 55 per cent. of the receipts,—certain deductions having been made from the actual expenditure before making the comparison with other Railways. Now I suppose that no deduction of this kind has been made from any of the English Railways, though of course the expenditure of all Railways would be subject to charges of a character which might be excluded from working expenses in their *strict* sense. How far the deductions are fair, I am unable to say; but I certainly observe in the statement items which, in my opinion, cannot fairly be deducted from working expenses; for instance "tonnage for right of way," which would in ordinary Railway accounts be debited to "Rent," and form part of the working expenses; again "Rebate," (or remission of part of the receipts to the freighter), which, if deducted from the working expenses, should in all fairness be also deducted from the receipts, in forming a comparison between receipts and expenses. Waiving however this objection, and assuming that

44½ per cent. is the correct proportion, let us enter into a fair comparison between this, and 48 per cent. of English Railways. (The Scotch proportion is 44 per cent., and the Irish 38.)

The Festiniog Railway is a small line to a number of Slate Quarries, and has a monopoly of the traffic; consequently it can charge a higher rate than that charged by the majority of English Railways, which compete with each other. Its charge for slates is 2·32*d.* (or 2¼*d.*), and 2·70*d.* (or 2¾*d.*) for other traffic, which may be said to be almost entirely "mineral," being of coal and lime. Now the charge for such material on the ordinary English lines varies from ¾*d.* to 1*d.* per ton per mile, or less than half the rates charged on the Festiniog Railway. It is true that on the average of English lines the distance is greater than on the Festiniog line, and that the cost of loading would not be spread over so great a number of miles, but on the other hand the loading at one end is not done by the Railway servants, but in the quarries. Now on the Ceylon Railway we find that the cost of loading at the terminus is only 2*d.* per ton, and this, divided over 14 miles, would only give an increase of ·14*d.* per ton per mile, which (if we take even the whole for the purpose of comparison) would reduce the Festiniog rates to 2·16*d.* and 2·56*d.*, as compared with ¾*d.* or 1*d.*

For simplifying the question however, I will assume that the rates of freight are double those charged on ordinary Railways.

Now, supposing that instead of these rates the Festiniog Railway Company could charge double the rates it now charges,—it is clear that the working expenses would remain the same, (save perhaps in Income tax), whilst the receipts would be doubled. The proportion of expenses would in that case be reduced to 22¼ per cent. instead of 44½; but suppose on the other hand, for the sake of fair comparison, we take the same rates as those of other Railways, the receipts will be reduced to one-half, whilst the working expenses will remain the same, so that the proportion of working expenses to receipts would immediately mount up to 89 per cent., and if we take the *total expenditure* as in other Railways, we have a proportion of 110 per cent., or an expenditure exceeding the receipts.

2ndly. To deal with the fact that the Festiniog line yields 29½ per cent. interest on its original capital. It appears that the Company, whilst working the line by horses, was enabled to expend out of the profits a sum of £50,000 in additions to the line, so as to make it capable of being worked by locomotive power; and if this additional capital be taken into consideration, the interest amounts only to 12½ per cent. Still, this is a handsome return; but if we are to make a comparison with other Railways, we must see how this interest is obtained.

Supposing for instance that the Festiniog Railway Company were forced, by competition or otherwise, to carry their traffic at the same rates as those adopted on other lines, which I have assumed at half the rates now charged on the Festiniog line, the receipts would at once be reduced to one-half, or instead of £23,676 they would only amount to £11,838, whilst the working expenses, still remaining the same, would be £13,050, or a deficit, instead of 12½ per cent interest. In this comparison I have assumed the whole of the traffic to be a mineral traffic, though strictly speaking this is not the case, but the passengers' trucks only form 1-20th of the total number of trucks; and even the other trucks, which almost exclusively carry a mineral traffic of coal and lime, do not form 1-20th of the slate trucks. I have therefore simply confined my remarks to the question of slate traffic, though probably some slight reduction may be made in my figures for the small amount of traffic that may not be carried at such high rates. My aim has been to place before you, in as clear and concise a manner as possible, the principles on which a fair comparison can only be made.

The Festiniog line, it appears, was a profitable concern when worked only by horses, and it would be easy to establish the superiority of Horse Railways over the ordinary Locomotive Railways, were the interest on capital, or the proportion of expenditure to receipts, to be the only criterion for determining their relative merits.

3rdly. I now come to the question of the proportion of dead weight of rolling stock to freight; and in this respect the Festiniog Railway has an undoubted advantage so far as slate traffic is concerned, for slate is a compact article of freight, and a considerable weight of it may be packed into a small bulk.

Consequently, if a small truck be sufficient to contain as much as a pair of axles can bear, the small truck must have the advantage so far as dead weight is concerned. Few of the English Railways however have a traffic of one uniform dense character, and it is generally necessary, in order to avoid multiplication of rolling stock, to have a few types of truck, capable of carrying freight of all kinds. But, even if an ordinary Railway were to have a traffic of slates alone, I doubt whether the trucks could be constructed so as to have as small a proportion of dead weight as on the Festiniog line.

The case however wears a different aspect when we arrive at the consideration of a bulky and less weighty freight. Take, for example, coffee in "parchment," which I suppose forms from 90 to 95 per cent. of the freight from Kandy to Colombo. Its bulk (weight for weight) must be eight or nine times that of slates, (and this is no extreme, for unpressed hay, straw, and other agricultural produce are thirty times the bulk of slates). I do not know what

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the dimensions of the Festiniog slate trucks may be, but assuming that they are constructed so as to be capable of holding only their usual freight of slates, it would be necessary to use eight or nine of these trucks to carry the same weight of the more bulky article, coffee; so that whilst the same weight would be carried, the dead load would be increased eight-fold (and in the case of the hay and straw, thirty-fold.) This is assuming that the slate trucks are only sufficiently large to carry the slates in them, that the same *bulk* of coffee is to be carried in these trucks; and I have assumed this in order to simplify the question and shew the principle involved. At the same time I have no doubt that trucks could be designed on the 2 feet gauge so as to reduce the dead load below the proportions I have given in the comparison between bulk and bulk. There is no doubt, however, that whilst small carriages bear the palm as regards dead load, for dense, compact freights, the large carriages are more economical for light bulky freights; and this principle is evidently recognized in India; for I learn that on some of the Indian Railways an endeavour is being made to economise the dead load by increasing the size and capacity of the trucks.

Before I leave the subject of dead weight, I must briefly refer to an assertion in one of the articles of the "*Times*," which is so palpably dishonest that I cannot pass it by unnoticed. After going into some elaborate proofs that a ton or more dead weight is carried for every passenger, the article continues:—"Surely it must be a severe reproach to mechanical science so long as a ton of passengers means, according to one calculation 20 tons, or according to another 33 tons," &c., and then proceeds to shew, that by the system it advocates, carriages may be constructed so that a passenger and his dead load, instead of weighing a ton or more, shall only weigh 5 cwt. Now, any one who has the slightest acquaintance with the working of Railways knows, that the principal causes of excessive dead weight have nothing to do with construction, but with the traffic arrangements, and with the travelling public. The dead weight is caused by the necessity for providing for the maximum number of travellers that may possibly travel by Railway—by the haulage of empty carriages—by the system practised by the travelling public of reserving empty carriages for themselves—and innumerable other reasons, well understood by traffic managers. Even the most superficial observer travelling on the English Railways must have noticed that the carriages are seldom filled to a third of their capacity, and that many run quite empty; this explains the secret of the immense dead weight.

Our third class carriages on the Ceylon Railway, when they are properly filled (as they almost always are), do not amount to 4 cwt. per passenger, including the weight of the passenger, and they are of no special construction; so that the wonderful improvement expected by the "*Times*" article is by no means so very great as it appears to be on paper. There is certainly room for reduction of the dead load of carriages in construction to a limited extent, but the travelling public in England will not bear it.

I remember, several years back, some carriages were constructed in the north of England which reduced the dead load to 1¾ cwt. per passenger, exclusive of the weight of the passenger himself, but it was found that the public would not travel in those carriages; and practically they involved more dead weight than the ordinary carriages, because the passengers in them were so few. After about a year's trial they were withdrawn.

As a rule, the dead weight on Railways (both with goods and passengers) due to construction, is a mere bagatelle compared with that necessitated by traffic arrangements.

4thly. I now come to the question of the cheap construction of Light Railways.

This advantage, on investigation, will be found to be less than might at first be imagined.

The land is nearly the same in both cases; the fencing, the telegraph, the signals, the same; the stations the same; the sidings longer, unless more numerous trains are run.

The rolling stock more or less expensive according to the bulk of the traffic.

The permanent way will perhaps shew the greatest saving, but that will be effected chiefly in the sleepers.

The earthwork varies much, according to its magnitude. Take for instance the heavy embankments which would be required on the Gampola line, to keep the Railway above flood level. In an embankment 50 feet high the slopes of 1½ to 1 which form the greater portion of the earthwork, remain the same, whatever may be the width of gauge, the only saving is a slip cut from the middle of the embankment, and each foot of such width would only effect a total saving of 1-60th part of the whole cubic contents. Again, in bridges of great span the reduction would be but small, because the weight of the train bears so small a proportion to the weight of the bridge itself.

The culverts cannot be reduced to any appreciable extent, except slightly in length—the difference of cost between a 7 foot gauge and the ordinary 4 feet 8½ in. gauge is generally considered by Engineers to be about 7 or 8 per cent.

Even Captain Tyler, R.E., who has so strongly advocated the light system, and whose position as Government Inspector of Railways has done so much to bring the subject prominently before the public—even he admits that in "flat countries very little saving can be effected by reducing the gauge; but he believes that in mountainous districts sharper curves, which work more easily in the narrower gauge, can be better employed, so as to enable costly works to be avoided." If this be the case, then comes the question,

are sharp curves precluded by the ordinary gauge? A few years ago such a question would have been answered in the affirmative—for, when the Ceylon Railway was first designed it was considered almost unique among Railways, and I had no small opposition to overcome in the Colony, because the curves in my line of Railway were so sharp. My line was then designated as "a series of zig-zags and chamois' leaps, at right angles to one another."

Since that time, however, the extension of Railways to districts previously considered inaccessible for locomotives, has led to the adoption of still sharper curves, and the attention of Engineers has been directed to the improvement of rolling stock, in such a manner as to enable it to pass without difficulty round such curves.

The sharpest curves on the Festiniog Railway are of about 115 feet radius; but lately a steam carriage, 43 feet long, has been exhibited near London, running round curves of only 50 feet radius, on the ordinary gauge of 4 feet 8½in., at a speed of 25 miles an hour. It is clear then that sharp curves are to be obtained on the ordinary as well as on the exceptionally narrow gauge—and, therefore, that which is supposed to be the greatest element of economy in such lines, is illusive, as curves of a radius less than half of those on the Festiniog Railway may be used in combination with the ordinary gauge.

5thly. It now only remains to me to discuss the fifth advantage claimed by the Festiniog Railway, viz., that the light character of the rolling stock reduces the wear and tear considerably. This is true to a certain extent, but less than might at first sight be imagined; because, it must be remembered, that the great causes of wear and tear in England are the high speeds and heavy engines. In fact, this is admitted in the articles of the "*Times*," from which the following is a quotation. "The carriages and waggons are comparatively innocent. Go to him" (the Engineer of the line), "and he will tell you 'we carry millions of tons of goods on our line, but we might carry as many millions more without hurt, were it not for so-and-so's engines; they tumble and grind along and break down all before them; what should be a perfect road for years, with not more than two men per mile to look after, is now hammered out in as many months, with five times the number of men to look after.'"

Now, *heavy trains*, combined with *high speeds*, require heavy engines, and cannot be adopted without extreme wear and tear.

The Manchester and Liverpool Railway was for many years worked with engines as light as those used on the Festiniog Railway, and I well remember the time when the southern division of the London and North-Western Railway, between London and Birmingham, was entirely worked by small four-wheeled engines, not a third of the weight of the present monster engines.

There is no reason why lighter engines, and even waggons of a much lighter character than those now used, should not be employed on branch lines of ordinary gauge, provided that slow speeds be adopted. There are few lines in England on which the traffic descends by its own gravity, as on the Festiniog Railway, or on which the bulk of the traffic requires no power beyond that necessary for hauling the empty trucks back again. The gradients are by no means difficult, the steepest being only 1 in 82, yet the expenses per train mile are nearly double those of the average of English lines.

An endeavour has been made to shew that the expenses should be greater on the Festiniog line, because the trucks are hauled back empty; but it must be remembered that the Festiniog traffic is of such a character, that the trains one way may be filled to the full extent, and that as the traffic is "through," there is but little shunting: whilst the traffic on ordinary Railway is such, that as a general rule, taking into consideration half loads and empty returns, the capacity of scarcely more than one-third of the trains run can be considered available.

Moreover, the comparison made is that of a slow speed Railway against the working expenses of high speed lines; and high speeds must be proportionally more expensive than low.

To recapitulate,—I am of opinion that the advantages claimed for the Festiniog line, when compared with the English Railways of ordinary gauge, may be disposed of as follows:—

1. The proportion of working expenses to receipts would be far greater than that of the average of English lines, were the rate of freight the same.

2. If the rates of freight were the same as those of the average of English lines, the interest of 29½ per cent. would dwindle down to a deficit.

3. The advantages with regard to dead weight do not hold good in the case of light, bulky freight.

4. The sharp curves, which are claimed as the principal means of saving in the Railways of exceptionally narrow gauge, are not peculiar to that gauge.

5. That light engines and rolling stock may be constructed without having recourse to a specially narrow gauge.

6. That the working expenses per train mile are more than double those of the Irish lines, with which they may be fairly compared. At the same time, I am far from wishing to condemn, either the light system or the Festiniog line. I believe the former possesses many advantages, and may be adopted with good results under suitable circumstances, and

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the latter is a most interesting and instructive work, reflecting credit on all concerned in it; but I do protest against the conclusion that the facts brought out prove its superiority over the ordinary gauge, under all circumstances, as its supporters endeavour to prove.

It is not unusual, when Engineers bring forward arguments in opposition to the light system, to consider that their opposition is actuated by "antiquated notions; that they are attached to the orthodox plans to which they have been accustomed all their lives; and that consequently they are averse to a change." I believe however, that my long connection with the Colony will free me from any such imputation; in fact, the accusation frequently made against me is that I am too fond of novelties and reform. Be this as it may, a reference to my reports will shew them that I have for many years contemplated the introduction of Light Railways into Ceylon, and, in fact, recommended one for the opening of the Dimbula district; and in my report of February, 1866, on Light Railways in India, though condemning the system adopted in that country, I recommended, as a basis for the Light Railways in Ceylon, a 3 feet gauge.

At the same time, the evils of a break of gauge are not to be overlooked, and all the circumstances of the case should be carefully considered, and the advantages should be well marked, to justify it. I am strongly of opinion, that it will be a mistake to make a break of gauge between the Main line and Gampola.

The traffic will, I am convinced, justify the construction of the line of the same gauge with the main line, and but little can be saved by the adoption of an exceptionally narrow gauge.

The greatest causes of expenses in the Gampola line will be the terminal station, the sidings, and the high embankments necessary to keep the line above flood level. The cost of construction might be very much diminished, even were the line to be constructed as a light line on the 5 feet 6 in. gauge, but I would not recommend it; and I feel sure, that should the Gampola line be made of an exceptionally narrow gauge, it will, at some future time, be re-laid at the ordinary gauge. This has been the case with the Arconum and Conjeveram Railway, a light line of 4 feet gauge, which was intended to inaugurate a new system of Light Railways in India. It is now being re-laid to the ordinary 5 feet 6 gauge. Gampola is a centre into which the Náwalapitiya, the Pusselláwa, the Pupuressa, and the Dolosbágé districts pour their traffic; and it will scarcely be worth while for freighters of carts arriving at that point to use the Railway, if there is to be a change caused by a break of gauge after 7 or 8 miles. It will be almost better for them to cart the coffee direct to Pérádeniya, and the traffic will probably be lost to the Railway by the change of gauge. Moreover, the Pérádeniya Station is much confined, and there is but little room for the transfer, whilst at Gampola plenty of space is to be obtained. I must further express my strong conviction, that reform in rolling stock is required rather than in gauge.

I have, &c.,
GUILFORD L. MOLESWORTH.

The Hon'ble
The COLONIAL SECRETARY,
Colombo.

V.

REPORT

UPON

RAILWAY EXTENSION TO NAWALAPITIYA:

WITH

ABSTRACTS OF ESTIMATED COST.

BY

E. G. STRONG, ESQ.,

CHIEF RESIDENT ENGINEER, CEYLON RAILWAY.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

PRINTED BY WILLIAM SKEEN, GOVERNMENT PRINTER, CEYLON.

1870.

RAILWAY EXTENSION.

REPORT.

Ceylon Government Railway,
Engineering Department.
Colombo, 19th November, 1870.

SIR,

WITH reference to my letter No. 45 of 18th July last, in which I informed you, that I had made a preliminary examination of the country between Pérádeniya and Náwalapitiya, with the view to obtaining a favourable line of country for the construction of a 3′ 6″ gauge Railway, I have the honor to inform you, that a favourable Line has now been obtained, as shewn in the accompanying plan and longitudinal section, on which the Estimate of cost of construction has been framed.

As regards the character of this Railway, the minimum radius of curve is ten chains. This is not severe for a narrow gauge Railway. There is nothing in the features of the country to necessitate a less radius of curve.

Of gradients, the steepest gradient is one in fifty. There are two such gradients, the first at the 11th mile (from Pérádeniya), which is one and-a-half mile in length; the second at the 15th mile, which is three quarters of a mile in length: with these exceptions the gradients are favourable.

The heavy works on the Railway will be the crossing of the deep paddy field valley, near Gampola, at the 5½ mile, where an embankment and viaduct are required.

At the 11½ mile a tunnel 316 yards in length is necessary; at the 13¾ mile, a short tunnel of 132 yards is required; and at the 14¾ mile, a tunnel 165 yards in length: these works are unavoidable.

The length of the Railway, from the junction with the Main Line at Pérádeniya to the terminus at Náwalapitiya, is 17 miles 5 chains.

Between Pérádeniya and Gampola I have adopted the Road trace, in preference to the River trace. The advantages which I consider the Road trace possesses over the River route are stated in table D.

In accordance with His Excellency's subsequent instructions, to prepare also Estimates of what would be the cost of construction of a Railway of 5′ 6″ gauge from Pérádeniya to Náwalapitiya; and further, an Estimate of what would be the cost of a Railway between the same places, but of 5ft. 6in. gauge from Pérádeniya to Gampola, and of 3ft. 6in. gauge from Gampola to Náwalapitiya, I now submit these Estimates, as follows:—

ESTIMATE A.

3′ 6″ gauge Railway.—Pérádeniya to Náwalapitiya .....£226,004.

ESTIMATE B.

5′ 6″ gauge Railway.—Pérádeniya to Náwalapitiya..... £250,528.

ESTIMATE C.

5′ 6″ gauge Railway.—Pérádeniya to Gampola; and 3′ 6″ gauge Gampola to Náwalapitiya .....£235,934.

These estimates have been framed in each case as for a Railway taking precisely the same Line of country, with the same curves and gradients.

On the merits of the two gauges, the circumstances of the case admit of much to be said in favour of each. Were this proposed Railway from Pérádeniya to Náwalapitiya, unconnected with any existing Railway, I would recommend the 3′ 6″ gauge, which would fully meet the requirements of the traffic; be cheaper to construct; not more expensive to work; and would be of the narrow gauge—which further extension into the Coffee district, if carried out, will necessitate; and would therefore be of uniform guage with Railway extension in that direction.

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But as the case is, this Railway from Pérádeniya to Náwalapitiya, would be a branch Railway, connected with and joining the existing Main Line from Colombo to Kandy, which is of 5′ 6″ gauge; and if not of same gauge as the Main Line, a transfer of traffic would have to be made from the vehicles of the 3′ 6″ gauge to those of the 5′ 6″, and this must result in loss and expense. And upon what will be the extent of the inconvenience, loss and expense, of this transfer, may be said to rest the question of the choice of gauges. On other points it is in favour of the 3′ 6″ gauge:—in first cost there is a saving of £24,524, in favour of the narrow gauge, and equal working expenses afterwards,—I say equal, for there is no data to shew that the cost of transport of a ton of goods in a 3′ 6″ gauge Railway is less than on a 5′ 6″ gauge;—the cost of working per train mile may be less, but I do not believe there will be any appreciable difference in the cost of transport as per ton of goods.

The advantage which the construction of this Branch as a 5′ 6″ gauge Railway would give, is, that of complete uniformity as between the Trunk Line and its Branch Line, and uniformity in Rolling Stock, which would avoid all transfer and handling of goods until they have finally reached their destination. This is an advantage upon which there can be no two opinions. It only remains to be decided whether this advantage is purchased at too high a price: the price is £24,524; the difference in cost between the 3′ 6″ and 5′ 6″ gauge; or, at six per cent., an annual payment of £1,470.

The value of the goods which would pass through Pérádeniya annually, to and from this Branch would be between One and Two Million sterling. Should the gauge be 3′ 6″ and necessitate the transshipment of this traffic, I am of opinion that the expense of, and the loss on, this transshipment, would be more than £1,470.

I would therefore recommend, that the Branch Railway, Pérádeniya to Náwalapitiya, should throughout be of the same gauge as the Main Line, namely 5′ 6″.

I have, &c.,
EDW. STRONG,
Chief Resdt. Engr.

The Hon'ble
The COLONIAL SECRETARY.

APPENDIX.

A.—Péradeniya to Náwalapiṭiya,.....gauge 3′ 6″..... 17 miles 5 chains.

	Abstract of Estimate.	£	s.	d.
1	Earthwork	60,546	18	0
2	Road Diversions	2,446	17	6
3	Sodding Embankment Slopes	1,000	0	0
4	Tunnels, 613 lineal yds	14,099	0	0
5	Bridges	10,023	0	0
6	Culverts	4,630	17	0
7	Stream Diversions	72	12	6
8	Level Crossings	350	0	0
9	Road Bridges	1,862	10	0
10	Permanent Way and Ballast	38,971	0	0
11	Sidings	4,200	0	0
12	Single rail Péradeniya to Kandy	2,368	0	0
13	Land and Houses	6,038	0	0
14	Stations	15,000	0	0
15	Fencings (16 miles wire)	4,224	0	0
16	Rolling Stock	28,160	0	0
17	Machinery and Workshops	8,000	0	0
18	Administration, 5 per cent.	9,983	15	0
19	Contingencies 7 do.	13,977	10	0
	Total—£226.004	0	0	

B.—Gauge 5′ 6″ throughout..... 17 miles 5 chains.

	Abstract of Estimate.	£	s.	d.
1	Earthwork	69,800	16	8
2	Road Diversions	2,691	0	0
3	Sodding Embankment Slopes	1,000	0	0
4	Tunnels	17,064	0	0
5	Bridges	11,621	0	0
6	Culverts	5,177	13	0
7	Stream Diversions	124	5	0
8	Level Crossings	350	0	0
9	Road Bridges	2,195	10	0
10	Permanent Way and Ballast	51,719	10	0
11	Sidings	5,250	0	0
12	Land and House Property	6,238	0	0
13	Stations	20,000	0	0
14	Fencing	4,224	0	0
15	Rolling Stock	20,000	0	0
16	Machinery and Workshops	6,000	0	0
17	Administration	10,960	7	10
18	Contingencies	16,112	0	0
	Total.. £250,528	2	6	

C.—Péradeniya to Gampola.....gauge 5′ 6″..... 7¼ miles.
Gampola to Náwalapiṭiya.....do. 3′ 6″..... 9 miles 65 chains.

	Abstract of Estimate.	£	s.	d.
1	Earthwork	63,220	2	3
2	Road Diversions	2,498	6	4
3	Sodding Embankment Slopes	1,000	0	0
4	Tunnels	14,099	0	0
5	Bridges	11,111	0	0
6	Culverts	4,811	12	0
7	Stream Diversions	114	8	6
8	Level Crossings	350	0	0
9	Road Bridges	1,862	10	0
10	Permanent Way and Ballast	45,527	15	0
11	Sidings	5,600	0	0
12	Land and House property	6,238	0	0
13	Stations	20,000	0	0
14	Fencing	4,224	0	0
15	Rolling Stock	20,000	0	0
16	Machinery and Workshops	10,000	0	0
17	Administration	10,532	0	0
18	Contingencies	14,745	5	11
	Total—£235,934	0	0	

S. McBean,
Engineer in Charge of
Way and Works.

Edw. Strong,
Chief Resident Engineer.

D.

CEYLON GOVERNMENT RAILWAY.

Péradeniya to Gampola, length 6 miles 70 chains. Gauge 5' 6"
Estimate by Road Route (30 chains shorter than River Route.)

		£	s.	d.	£	s.	d.
1.	Earthwork	17,695	1	11			
2.	Road Diversions	1,590	8	4			
3.	Sodding Embankment Slopes	500	0	0			
4.	Bridges	8,370	0	0			
5.	Culverts	806	8	0			
6.	Stream Diversions	108	0	0			
7.	Level Crossings	70	0	0			
8.	Road Bridges	252	10	0			
9.	Permanent Way (1 Mile Steel Rails)	20,032	12	0			
10.	Sidings (1 Mile)	3,500	0	0			
11.	Land	2,500	0	0			
12.	Stations	15,000	0	0			
13.	Fencing (5 Miles Double Wire)	2,640	0	0			
14.	Rolling Stock	10,000	0	0			
15.	Machinery and Workshops	6,000	0	0			
16.	Administration, 5 per cent.	4,463	0	0			
17.	Contingencies, 7 per cent.	6,560	19	3			
					£100,289	4	6
	Mr. Molesworth's Estimate, excluding Land, Stations, Administration, Machinery and Workshops, and Rolling Stock, by River Route, 7 miles 20 chains				92,790	0	0
	Eliminating Land, Stations, Administration, Machinery and Workshops, and Rolling Stock from my Estimate as above, but leaving Contingencies, the amount for comparison of the respective merits of the two Routes stand:— Road Route 6 miles 70 chains				62,325	19	6
					£30,464	0	6

Arguments in favor of Road Route.

1. It is 30 Chains shorter than River Route.
2. There are fewer Curves.
3. There are 50,000 Cubic yards Less Rock.
4. Facilities of Construction greater, and time required for construction consequently very much less.
5. Waterways of every description less.
6. No retaining Walls required.
7. Retention of high-flood level unnecessary.
8. Ballasting facilities better.
9. Cost of Construction, £30,464 0*s.* 6*d.* less.
10. Permanent upkeep cheaper.

Colombo, 22nd November, 1870.

Edw. Strong,
Chief Resdt. Engineer.

VI.

FURTHER

CORRESPONDENCE

RELATING TO THE

IMPROVEMENT OF GALLE HARBOUR.

(In continuation of Sessional Paper IX. of 1869.)

Ordered by His Excellency the Governor to be Printed.

CEYLON:
PRINTED BY WILLIAM SKEEN, GOVERNMENT PRINTER,
COLOMBO.

1870.

SCHEDULE.

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FURTHER CORRESPONDENCE

RELATING TO THE

IMPROVEMENT OF GALLE HARBOUR.

GALLE HARBOUR.

FURTHER CORRESPONDENCE.

No. 1. Governor Sir H. Robinson to Earl Granville.

Sessional Paper XXIV. of 1869, with two plans.

No. 1.

Governor Sir H ROBINSON to EARL GRANVILLE.

No. 28.
Miscellaneous.

Queen's House, Galle,
Ceylon, 22nd January, 1870.

MY LORD,

FINDING that some difference of opinion existed here as to whether the Breakwater suggested by Colonel Clarke, R.E., and Mr. C. H. Gregory, would afford sufficient shelter to Galle Harbour, I appointed a Commission, composed of four Engineers and four nautical men, to consider and report on the proposed improvement of the port.

I have now the honor to forward a copy of the Report of the Commission, from which your Lordship will observe, that the Commissioners were unanimously of opinion, that Breakwaters, situated as shewn in the chart accompanying the report, would effectually protect the whole Bay of Galle, and make it a spacious and well-sheltered harbour.

Seven of the Commissioners were also of opinion, that the works proposed for the protection of the harbour can be executed for £250,000; but one member, Mr. Harrison, considered that the work would cost £386,000. The remaining engineering members of the Commission have however attached to Mr. Harrison's memorandum their reasons for dissenting from his view, and for adhering to their opinion, that the proposed works can be executed for the sum of £250,000.

I see no reason to doubt the soundness of the conclusion arrived at by the majority of the Commissioners.

I have, &c.,
HERCULES ROBINSON.

The Right Hon'ble
EARL GRANVILLE, K.G.

No. 2. Governor Sir H Robinson to Earl Granville.

No. 2.

Governor Sir H. ROBINSON to EARL GRANVILLE.

No. 29.
Legislative.

Queen's House, Galle,
Ceylon, 22nd January, 1870.

MY LORD,

WITH reference to your Lordship's Despatch No. 183 of the 22nd September last, I have the honor to forward Ordinance No. 2 of 1870, entitled "An Ordinance to provide for the improvement of the Galle Harbour."

2. The principle of the Bill was objected to by only one of the unofficial members, Mr. Harrison, who, as a member of the Galle Harbour Commission, had dissented from the report of his colleagues on the question of cost, as referred to in my Despatch No. 28 of this day's date.

3 On the measure being adopted by a majority of the Council, Mr. Harrison handed in a Protest, which he requested might be attached to the Minutes of the day, and a copy of which I have the honor to enclose.

4. The objection taken by Mr. Harrison to the principle of the Bill was, that as the Colonial Revenue is not likely ever to derive any considerable direct addition from the improvement of Galle Harbour, however successful the present scheme may prove, therefore the responsibility of the work, and the risk of failure, should not be allowed to devolve solely on Colonial resources, but should be accepted by the Home Government.

GALLE HARBOUR

FURTHER CORRESPONDENCE

No. 2.
Governor Sir H. Robinson to Earl Granville.

5. As pointed out in my Address on closing Council, I do not think that such a position can fairly be maintained. It is clear that the improvement of the harbour could never be carried out except by the local Government, and it appears to me equally obvious, that in a matter of this kind management and responsibility must go together. To propose that the Home Government should find the money and take the risk of failure, and that the Colony should expend that money free from all responsibility, and at the same time appropriate any gain which may possibly result from success, is not reasonable.

6. I attach an estimate shewing the anticipated annual receipts under the Schedule attached to the Ordinance, and from Pilot dues, estimated at £19,172, and the probable annual expenditure, including interest on £250,000, estimated at £17,804, leaving a surplus over expenditure of £1,368.

7. I have to request that your Lordship will be pleased to submit the Ordinance for Her Majesty's gracious confirmation and allowance.

I have, &c.,

The Right Hon'ble
EARL GRANVILLE, K.G.

HERCULES ROBINSON.

P.S.—I enclose a copy of the debates which took place in the Council, as published in the *Observer* Newspaper, when the objection to the principle of the Bill was raised by Mr. Harrison.

H. R.

Enclosure No. 2 in No. 2.
Mr. Harrison's Protest.

Enclosure No. 2 in No. 2.

MR. HARRISON'S PROTEST.

Galle Harbour Ordinance.

I desire to avail myself of the right of members of this Council, under the 38th clause of the "Rules and Orders," to record the reasons of my dissent from the opinion of the majority on this Ordinance; and I beg that the same may be entered by the Clerk at the end of his Minutes of this day's proceedings.

The reasons of my dissent are as follows:—

(1.) That it is unjust to impose upon this Colony the whole risk and responsibility attending the construction of such works as are necessary to make at Galle a safe harbour and complete packet station.

(2.) That the sum proposed to be advanced to the Colony by the Imperial Government is quite insufficient to carry out the works proposed, efficiently, and with reasonable expedition.

(3.) That if the works now proposed were carried out, Galle would not have a safe harbour, or be a complete packet station, and that a large additional sum would have to be spent to attain these objects.

(4.) That if these objects were not attained, it would not be just or politic to levy the heavy Port dues and Coal duties proposed by the Ordinance.

In my first reason I am supported by the opinions of the late Sir Henry Ward, in his Despatch on this subject, dated 14th November, 1858, to the Secretary of State for the Colonies, to which I beg that reference may be made; and by His Excellency Sir Hercules Robinson, if my second reason of dissent is well founded. He says, in his Despatch of the 26th January, 1867, "The improvement of the Galle Harbour is not a scheme in which this Colony is sufficiently interested to justify its undertaking, for this purpose, a large expenditure, which is not likely to prove successful in a pecuniary point of view." Incurring a heavy liability is tantamount to "undertaking a large expenditure." I shall shew hereafter, that my second and third reasons of dissent are well founded; and if I succeed in proving this, it cannot be disputed that the Colony would incur a heavy liability, if it embarked in this scheme on the conditions now proposed. These conditions are set forth in the Ordinance, but more particularly in the 2nd clause, which empowers the Governor of Ceylon "to borrow from the Public Works Loan Commissioners in England, for the purpose of improving the harbour of Galle, any sum or sums of money not exceeding in the whole £250,000 sterling; the amount so borrowed, and the interest thereon, being charged on and made payable out of the general revenue of this Island." By this clause the general revenue of this Island, and the property of every taxpayer in the Island, are mortgaged to repay to the Imperial Government the principal sum, £250,000, proposed to be advanced, and to pay annually the interest due thereon.

Supporters of the project will say, "The Harbour dues and Coal duties proposed to be levied under this Ordinance will provide sufficient to pay both of these." If so, then, I would ask, "Why is the collateral security of the general revenue required? Why are not these dues and duties, payable by those for whose benefit the harbour is to be improved, mortgaged as security for the amount borrowed, and the interest thereon, and accepted as security by those advancing the money?" Presumably, because the security is not

considered sufficiently good. There is, therefore, risk to those who give the collateral security. Who, then, should give that collateral security, and bear the risk? Those, I should say, who are principally interested in the improvement of the harbour, and who are most desirous of seeing that improvement effected. These are not the tax-payers of Ceylon, but all those who are interested in the mail and passenger traffic and vast goods trade between England, or rather between Europe and Asia and Australia.

I am not one of those who hold that Ceylon is not in any degree interested in the improvement of Galle Harbour; but I do hold that she is interested in it only in a comparatively small degree, and that the share of risk and responsibility imposed on her should be fairly proportioned to that interest. I am of opinion therefore, that whether the cost of these proposed works be great or small, whether the risk and responsibility of carrying them out be great or small, the cost, the risk, and the responsibility, should be shared by, and be borne chiefly by, those who are most interested in the improvement of the harbour, and not be imposed wholly on Ceylon, as would be the case if this Ordinance become law.

My second reason of dissent is, "That the sum proposed to be advanced to the Colony by the Imperial Government is quite insufficient to carry out the works proposed, efficiently, and with reasonable expedition."

The works recommended by the Commissioners appointed to report on the proposed improvement of Galle Harbour, are two Breakwaters of "pierre perdues," or unselected rubble; one 3,930 feet in length, in an average depth of water of 7 fathoms, the other 600 feet long, in 3½ fathoms' water, and for about 900 feet in very shallow water; the whole containing 1,265,637 cubic yards of stone;—the hill from which the material is to be obtained being conveniently situated, and the material itself as good as could be desired, except that in difficulty of working it resembles the toughest granite. From my experience of the value of labour in this country, I should estimate the cost of quarrying and moving this rock at about double the cost of similar work in England, and I believe I shall be borne out in this by the Director of Public Works in this Colony.

The Holyhead Breakwater, containing about double the quantity of material per lineal foot, cost over £150 per lineal foot.

The Portland Breakwater, somewhat less than double the quantity of material, per lineal foot, cost more than £120 per lineal foot.

The Galle Breakwaters, as now designed, 3,930 feet in 7 fathoms, and 600 feet in 3½ fathoms of water, allowing nothing for the 900 feet in very shallow water, would cost, at the rate per lineal foot of *Holyhead* Breakwater (£150) £679,500; at the rate per lineal foot of *Portland* Breakwater (£120), £543,600. Is it reasonable to suppose that they can be constructed for £250,000, which is at the rate of £55 per lineal foot?

But, even supposing for a moment, for the sake of argument, that these Breakwaters could be constructed in a manner for the amount estimated, I maintain that my third reason for dissent holds good, and that, even then, "Galle would not have a safe harbour or be a complete packet station, and that a large additional sum would have to be spent to attain these objects."

No provision is made for the removal of rocks within the sheltered anchorage, nor is any made for the construction of piers or wharves. But it is essential that funds be provided for these works, and that the works be executed, or my fourth reason of dissent can hardly be disputed; for, if there be not a safe harbour and a complete packet station at Galle, "it would not be just or politic to levy the heavy Port dues and Coal duties proposed by the Ordinance."

These extra works must be provided for under a supplementary estimate, little, if at all, short of £100,000.

Supposing then (I do not for a moment admit it), that the Breakwaters could be constructed for the sum "*not exceeding*" £250,000, to be advanced by the Imperial Government, where, I would ask, are we to find the remaining £100,000? Some reply, "The Imperial Government having advanced £250,000 for this work, must advance whatever further sum may be necessary for its completion." Even if this would be done, which I much doubt, where are the interest and contribution to the Sinking Fund to come from? The high Harbour dues and Coal duties imposed by the Ordinance are all required to meet the payments on account of the £250,000 advanced; and the collateral security, the general revenue, must be fallen back upon. But those who think thus of the readiness of the Imperial Parliament to come forward with a supplementary vote of £100,000 to complete the works commenced, may be, and I think are, mistaken; and I am of opinion, that the answer to an application for a further grant would be:—"By your representations, supported by estimates made by your officers, we were induced, much against our will, to advance to you on the security of the general revenue of the Colony £250,000 for the construction of these works. Your estimates having proved incorrect, we will not only not entertain favorably your application for a further advance, but we will insist upon your completing, out of the general revenue of the Colony, whatever works may be necessary for the accommodation of the steamers and ships touching at Galle; and unless you do so, we will not allow you to levy these dues."

What then will be the position of Ceylon? She will be compelled to set aside a considerable sum out of the general revenue, annually, for the completion of the works

GALLE HARBOUR.

FURTHER CORRESPONDENCE.

No 2
Enclosure No 2 in No 2
Mr Harrison's Protest

If Port dues and Coal duties alone were mortgaged, it would be to the interest of the Imperial Government to find funds for the completion of the harbour; not so, if the general revenue were pledged.

The question of rapidity in the formation of the Breakwaters is one of no slight consequence. The Commissioners recommend in their report, that their plans should be carried out at once, and in their entirety, as they feel certain that any partial execution of them will not produce satisfactory results. The works therefore will be of comparatively little use until they are completed. Nevertheless, the Commissioners propose to dispense with staging. Setting aside the mere question of cost of forming the Breakwaters, (and I believe this could be done more cheaply with than without staging), the mere loss of interest resulting from the delay in the completion of the work would be far greater than the cost of the staging; and I do not hesitate to say, that it would take *three* times as long to complete the work without staging as would be required with staging. Surely it would be unjust to levy the proposed dues on shipping during the progress of the works, unless those works were being pushed on with all diligence and their completion accelerated by all reasonable means.

I believe that I have succeeded in shewing that my objections to this Bill are not raised in any captious spirit, and that I have good grounds for my dissent from the opinion of the majority thereupon.

In conclusion, I would beg to be allowed to make a few suggestions as to how this most important work might be carried out without manifest injustice to this Colony. The idea of constructing these great works at Galle is entertained only because of their "Imperial and Cosmopolitan value," and even the prospective benefit which will accrue to this Colony is very small comparatively. Let the Imperial Government recognize this fact, and impose upon this Colony a share of the risk and responsibility not exceeding one-fifth of the whole cost. Let the Imperial Government advance through the Public Works Loan Commissioners whatever sums may be necessary to do all that may be required at Galle, taking the Harbour dues and Coal duties in repayment of the advance and as interest, on the terms now proposed in the Ordinance; and, if these be not sufficient to pay the proposed annuity, let the deficiency be made up by the Imperial and Colonial Governments, in the proportions of four-fifths by the former and one-fifth by the latter; and as it is argued that by this arrangement the Colony would have the harbour clear of debt at the end of thirty-five years, it might be provided that it should then become a free port, or that the dues should be very much reduced.

Whatever course be pursued, let not this Colony rush headlong and blindfold into a work, simply because it is offered an advance of a quarter of a million of money on apparently easy terms. Let the possibility, even the probability, of half a million being required be fairly considered, and let us not give our bond, and mortgage the general revenue of the Colony, until we know for a certainty that funds for the completion of the work will be found by those who are most interested in it.

G. DENIS B. HARRISON.

Council Chamber,
Colombo, January 5th, 1870.

Enclosure No 3 in No 2
Estimated Revenue and Expenditure

Enclosure No. 3 in No. 2.

ESTIMATED Revenue and Expenditure.

Estimated Revenue.	£
By Duty on Coals, as per Schedule A.	5,443
By Port Dues, as per Schedule B. ..	11,422
By Pilot Dues under Ordinance 6 of 1865	2,307
	£19,172

Estimated Expenditure.	£
Interest at 5 per cent. on £250,000, the estimated cost of the works ..	12,500
Probable sum required for maintenance of works	2,000
Present cost of Master Attendant's Establishment	2,021
Additional do. do. when works are completed for upkeep of Light on end of Breakwater . .	130
Pilotage paid to Pilots' Establishment	1,153
	£17,804
Surplus Revenue ..	1,368
	£19,172

No. 3.

Governor Sir H. Robinson to Earl Granville.

No. 3.
Governor Sir H. Robinson to Earl Granville.

No 30
Miscellaneous.

Queen's House, Galle,
Ceylon, 22nd January, 1870.

My Lord,

With reference to my Despatches Nos. 28 and 29 of this date, I have the honor to report that it is the opinion of this Government that tenders should at once be invited in England for the execution of the works contemplated for the improvement of Galle Harbour

I enclose a letter from Mr. Molesworth, the Director of Public Works, covering an estimate for the work, together with an analysis of the details, shewing the calculations upon which his estimates both as to cost and time have been based. Also a specification of the works proposed, with a draft form of tender, and twenty-two plans, sections, and drawings, authenticated by the Director of Public Works for the Government of Ceylon.

Mr. Molesworth considers that these papers contain all the information which is necessary to enable the Crown Agents to advertise for tenders, and to enter into a Contract on behalf of this Government. I have therefore to request, that if your Lordship should concur in the advisability of the course proposed, the Crown Agents may be instructed to take the necessary steps to procure tenders, and be authorized to accept the best offer they may receive, provided that it should not be much in excess of £250,000.

Mr. Molesworth is proceeding to England next month on leave of absence for a year, so that he will be on the spot to supply parties desirous to tender with any further information which they may require.

In the event of a Contract being entered into, it will be necessary to appoint a Consulting Engineer in England, as prescribed by the specification. It appears to me the person to be selected for the appointment should be a Civil Engineer who has had special experience in harbour works; I would suggest that the Crown Agents be directed to confer on the subject with Colonel Clarke, R.E., the Director of Admiralty Works.

I have, &c.,
HERCULES ROBINSON.

The Right Hon'ble
Earl Granville, K.G.

Enclosure No. 1 in No. 3.

The Director of Public Works to the Hon'ble the Colonial Secretary.

(*Galle Harbour Improvements.*)

Enclosure No. 1 in No 3
The Director of Public Works to the Hon'ble the Colonial Secretary

No. 35.

Colombo, 11th January, 1870.

Sir,

As I observe in the proceedings of Council that Mr Harrison has expressed some doubts as to the sufficiency of the estimate of the Commissioners for the cost of constructing the Breakwaters at Galle, I have the honor to submit my estimate for the works together with a careful analysis of the details, which will, I trust, convince you that there will be no difficulty in completing the works within the estimate made by the Commissioners, and also in a reasonable time.

Mr. Harrison appears to have fallen into the error of supposing that all the materials required for the formation of the Breakwater will be deposited by tipping, but in view of the peculiar advantages which the quarries at Galle Harbour will present for depositing the larger part of the material by lighters, it would be absurd to have recourse to the comparatively extravagant and slow process of tipping, further than may be necessary for completing those portions which cannot be deposited by lighters.

Should the work be entrusted to me for execution I propose to employ a steam tug in connection with a flotilla of double lighters arranged with drop stages, by which the material may be deposited with four times the expedition, and less than half the cost, of tipping. With a train of boats loading under a stage close to the quarries, another being marshalled, and a third train in motion, the materials may be deposited with the greatest expedition, provided that proper and systematic arrangements are made. The steam tug can run a train of lighters out in front of the line of Breakwater, slightly slacking speed as each of the brakesmen in charge of the lighters in succession watches for the moment when, ranging in line with the poles set up for his guidance, he may in an instant let go his brake, and deposit the material without stopping the motion of the train; the tug may then turn with the train and bring back the empty lighters, leave them in the rear of those in course of loading, and hook on to the other train which has been marshalled during its absence and should be ready on its return.

GALLE HARBOUR.

FURTHER CORRESPONDENCE

No 3.
Enclosure No. 1 in No. 3.
The Director of Public Works to the Hon'ble the Colonial Secretary.

In my calculations I have assumed only 10 trips per day, with 4 double lighters in each train, but with proper arrangements, and under favorable circumstances, that number might be nearly doubled.

Objections have been raised to the cost of depositing by lighters, but I presume that these objections have been based upon the data afforded by the Plymouth Breakwater, where the system adopted was objectionable, and must necessarily have been costly, as the stone was conveyed a distance of five miles in *ordinary sailing vessels*, without any conveniences for discharge.

The quarries on the eastern side of Galle Harbour are most convenient, running down into the sea and rising up to a great height, so that a magnificent working face may be obtained, and altogether the work will be so concentrated, that it may be under the closest and most constant supervision.

My original estimate for the Harbour lights at the ends of the Breakwaters was £500, as at the time I made the rough estimate I proposed to place lights of a more simple character than I have since adopted, after conference with the Master Attendant of Colombo; I have therefore increased it to £700.

As it is the intention of the Government to invite tenders for the execution of the works, I have the honor to submit a specification and form of tender for the approval of Government.

The plans and drawings, of which a list is annexed, are in course of preparation, and shall be forwarded to you in a few days.

I have, &c,

GUILFORD L. MOLESWORTH,
Director of Public Works.

The Hon'ble
The COLONIAL SECRETARY.

Enclosure No. 2 in No. 3.

ESTIMATED Cost of the Galle Harbour Improvement Works.

Enclosure No. 2 in No. 3
Estimated cost of the Galle Harbour Improvement works

The quantities in the Breakwater are roughly calculated at 340,000 cubes of 100 cubic feet, measured as it will stand with interstices.

I estimate the cost of this at 13*s.* 4*d.* per cube, or £227,000 for the whole work, and my analysis of the cost is as follows.

Blasting, 8*s.* 2*d.* Blasting varies much in cost All the replies given by my Officers range from 1*s.* 6*d.* per cubic yard to 2*s.* 9*d.* This latter price is however for blasting in light shots, to detach rock in small pieces for sledging up into road metal. I prefer however to take the outside price, 2*s.* 9*d.*, which equals 10*s.* 2*d* per cube of 100 cubic feet: and if we allow 20 per cent. for interstices, which is found in practice to be the amount in such Breakwaters, the work will, as measured, cost 8*s.* 2*d.* per cube.

With proper management two men will easily load a cube per day; this, at 9*d.* per man, is 1*s.* 6*d.* per cube.

The cost of the necessary plant will, I estimate, be as follows:—

1 Tug Steamer	£7,000
15 double Barges, fitted with drop platforms, crabs, &c., at £400	6,000
Staging for tipping into barges	2,500
3 Contractor's Locomotives, 3 feet gauge, at £800	2,400
200 Trucks, at £20	4,000
200 Tons of temporary Rails, at £10	2,000
10,000 temporary Sleepers, at 3*s.*	1,500
Sundries	1,200
	26,000
Less Value of Plant at completion of Contract	6,100
	£20,500

And $\frac{20,500 \times 20}{340,000}$ = 1*s.* 2½*d* per cube.

Discharging by Trips.

Say one locomotive will take at least 10 trips per day, and will take 10 cubes at each trip, or 100 cubes per day. The cost of this will be as follows: —

	s.	*d.*
1 Engineer	10	0
1 Fireman	2	0
100 Tip men and others attending to the road and marshalling	80	0
Fuel, oil, &c.	30	0
Wear and tear	20	0
	142	0

$\frac{142}{100}$ = 1*s.* 5*d.* per cube.

No 3
Enclosure No. 2 in No 3
Estimated cost of the Galle Harbour Improvement works

Discharging by Drop-Barges.—Cost.

	s.	d
1 Captain	10	0
1 Engineer	10	0
50 Crew and Bargemen, at 1*s.*	50	0
100 men employed on and about staging, at 9*d.*	75	0
Fuel, oil, &c.	100	0
Wear and tear	20	0
	265	0

With four barges being loaded, four being marshalled, and four in motion, the steam tug could take at least ten trips per day—probably much more with good management,—and at each trip would take four double-barges, each carrying 10 cubes=40 cubes per trip, or 400 cubes per day. The cost would than be $\frac{265}{400}$ = 8*d.* per cube; and, assuming one cube to be tipped for every six barged, the average would be as follows:—6 at 8*d.* = 48*d.*
1 at 17*d.* = 17

7) 65

$9\frac{1}{2}d.$

Sundries.

Two dioptric Lights of 6th order, with building and structure complete, at £350	£700
Removing Rocks, 40 cubes at £6	240
8 Beacons at £100	800
40 Stones, averaging 15 tons each, deposited at end of Breakwaters, at £20 each	800
Concrete filling	160
Superintendence, &c.	5000
	£7700

$\frac{7,700 \times 20 \times 12}{340,000} = 5\frac{1}{2}d.$

For Contingencies, say £20,000 = 1*s.* 2*d.* per cube.

Abstract.

	s.	d.
Blasting	8	2
Loading	1	6
Plant	1	$2\frac{1}{2}$
Discharging	0	$9\frac{1}{2}$
Sundries	0	$5\frac{1}{2}$
Contingencies	1	2
Say 13*s.* 4*d.*	13	$3\frac{1}{2}$

The cost of the whole work will be therefore £227,000.

The time required to construct the Breakwaters will be as follows:—Tipping 100 cubes per day, at the low average of 150 working days per year = 15,000 cubes per year. Barging, at the rate of 400 cubes per diem, with the low average of 200 working days = 80,000 cubes. Total 95,000 cubes per year = $3\frac{1}{2}$ years' work—say half a year for minor works of completion, and half a year for contingencies = $4\frac{1}{2}$ years in all.

GUILFORD L. MOLESWORTH,
Director of Public Works.

Enclosure No 3 in No. 3.

Galle Harbour Improvements.

SPECIFICATION.

Enclosure No 3 in No 3
Specification

Interpretation of term Engineer

The term Engineer in this specification shall be held to be the person appointed by the Government of Ceylon as the Consulting Engineer, for the purpose of matters and work in England, and the Director of Public Works in Ceylon (or such Officer as he may delegate), for the purpose of matters and work in Ceylon.

Nature of work

The works required to be undertaken under Contract are

Eastern Breakwater

1st. The construction of the Eastern Breakwater, running from the "Watering Point" to the "one-fathom rock" on the Matamadua reef, as shewn by the line AB on the plan B 1.

Western Breakwater

2nd. The construction of the Western Breakwater, running from the Utrecht Bastion to the "half-fathom rock" on the Polcatta reef, as shewn by the lines CDEF on the plan B 1.

Harbour lights.

3rd. The erection of a Harbour light on the outer end of each Breakwater, as shewn in the drawings B 17 and B 18.

Beacons

4th. The erection of eight beacons, in the positions shewn in plan B 1.

Removal of rocks.

5th. The removal of rocks at G and H on plan B 1, so as to give a full depth of $4\frac{1}{2}$ fathoms below low-water level at those points.

GALLE HARBOUR.

Maintenance.

6th. The maintenance of the whole of the works for a period of two years after their entire completion.

Nature of Contract.

The Contract is to be an absolute guarantee to complete the works, with all accessories specified, or which may be reasonably implied, for a given sum, without extras of any kind. Contingencies of every description that may arise being borne by the Contractor, subject to no increase or diminution whatsoever.

Extra work

No extra work whatever will be allowed on the contract, and any works required to be done beyond those which may reasonably be implied in this specification, must form the subject of a separate and special contract with Government.

Land

The Government will allow, free of cost, the temporary occupation and use of such Government lands at or near "Watering Point," as the Engineer may certify to be necessary for the purposes of the Contract, either for quarrying materials, for the erection of workshops, stores, offices, or residences of workmen, but the Contractor shall not enter upon or use any such land without the previous sanction of the Engineer in writing, and he shall vacate all or any portion of such land or premises at the expiration of the term of his Contract, or at any other time the Engineer may certify that it is no longer required for the purposes of the Contract.

Quarries.

The Government will also allow the Contractor to use, free of cost, the quarries in the Fort or western side of the harbour, subject to such regulations as may be necessary from time to time to guard against injury of Government property, breach of military regulations or requirements, and danger to the public.

Contractor not to sell materials.

The Contractor will not be allowed to sell any materials taken from the Government land, or otherwise dispose of them, except for the purpose of the Contract.

Customs duties.

All plant, machinery, and materials, certified by the Engineer to be actually required for the purposes of the Contract, will be admitted duty free.

Plant, &c

The Contractor shall, at his own cost, provide all materials, tools, machines, vessels, engines, and plant of every description required, for the proper execution of the works.

Advances on plant.

In order to assist the Contractor, the Government will make advances to him, from time to time, on the value of plant and temporary materials shipped by him, to such an amount, not exceeding £20,000, as the Consulting Engineer may think reasonable, and may certify to be requisite and proper for the execution of the Contract. Such certificate is to be supported by the production of the Contractor's invoices, bills of lading, receipts of freight, and policies of insurance.

Plant to become Property of Government as a lien

The whole of the plant shall become the property of Government, as a lien for the repayment of the advances and for the due performance of the Contract, until the satisfactory completion of the work, when they will again become the property of the Contractor.

Repayment of advances

The advances for plant will be repaid to Government by deductions at the rate of 15 per cent. on all sums certified by the Engineer to be due to the Contractor for work done

Shipment at risk of Contractor

All plant and materials, whether temporary or permanent, are to be shipped at the risk and expense of the Contractor, after having first been inspected by the Consulting Engineer, or his authorized agent, and the Contractor must replace, or make good to the satisfaction of the Engineer, any articles damaged, lost, or destroyed.

Order and manner of works

The order and manner in which the works are to be carried on, shall be under the absolute control of the Consulting Engineer, so far as the work in England is concerned; and of the Director of Public Works in Ceylon, so far as the work in Ceylon is concerned.

Contractor to furnish statement.

The Contractor shall, from time to time as required, furnish the Engineer with a statement of the steps he proposes for the execution of the work, and a list of the number of workmen and others employed, and the manner of employing them.

Payment of workmen

The Contractor shall pay all workmen and others employed by him on or about the works, at periods and in manner sanctioned by the Engineer, and in accordance with the usage of the country.

Contractor to employ competent persons

The Contractor shall employ competent persons to inspect and superintend the execution of the work, and the Engineer shall be at liberty to object to the employment of any unsuitable person on the work.

Contractor not to sub-let without sanction

The Contractor shall not assign or sub-let the Contract or any portion of the work without the consent of the Engineer in writing; and the sub-letting of any portion of the work, even when sanctioned by the Engineer, shall not relieve the Contractor from any responsibility whatever under the Contract.

Master Attendant's regulations

The Contractor shall observe all rules, regulations, or orders, given from time to time by the Master Attendant of Galle for the avoidance of any inconvenience, obstruction, danger, or injury to the harbour, shipping, or traffic of the port.

Surveys and drawings

The surveys, soundings, and drawings have been made with great care, and check lines have been run by the Surveyor-General's Department; but the Government will not be responsible for their accuracy, nor will any inaccuracies in them be held to give a claim to the Contractor to any extra payment whatever beyond the Contract sum.

Details of Breakwater.

The crest of both Breakwaters, except where otherwise shewn in the shallow water near the Utrecht Bastion, must be, when completed, 12 feet above the level of low-water and must range exactly in true lines, approved by the Engineer. The Breakwaters are to be formed entirely of unselected broken stone, and rock thrown in from tips, stages,

barges, or rafts, as may be found most convenient, and left to be formed into the slopes at which they will stand by the action of the waves.

Slopes.

The slopes given in the section drawing B 7, are those which experience has shewn that Breakwaters, thus constructed, will assume, and measurements will be made on the presumption that this will ultimately be the actual section; but no increase or diminution will be made in the amount of the Contract, should the section actually prove to be greater or less than that assumed.

Materials.

No gravel, sand, earth, or any material whatsoever softer or less durable than rock, shall be allowed to be deposited in the line of Breakwater, nor will any materials whatever be allowed to be deposited in any other part of the harbour, without the express sanction of the Engineer in writing.

Facing stones

The Contractor must place at the end of each Breakwater, in such position as may be directed by the Engineer, 20 large stones, roughly measuring 4½ feet × 4½ feet × 10 feet long. These must, when in position, have the interstices above low-water line filled in with concrete in cement, and be brought to an uniform surface.

Details of Harbour lights.

The Harbour lights shall be Chance's dioptric lights of the 6th order, capable of illuminating 90°, or other lights equal in character, and of makers approved by the Engineer; they shall be fitted with lamps, reflectors, and all other appliances necessary to put them in complete and perfect working order. One of the lights is to be fitted with a diaphragm, to shew a green, and the other, a red light. The lanterns are to be of the size ordinarily required for a dioptric Harbour light of the 4th order, and must be provided with gun metal standards, and fittings, and glazed with ⅝ inch plate-glass. They must also be fitted with proper funnels and ventilating cowls.

The iron structures must be bedded in concrete in cement, and the sockets and flanges turned and bored.

Beacons.

The beacons will be formed as shewn in the drawings, and each beacon will be fitted with a circular head, formed of wood and copper, painted in such colors as the Engineer may direct; each beacon will also be provided with a coloured lamp and apparatus for hoisting it.

Rocks.

The rocks to be removed are marked on the plan B 1, and may be removed either by blasting or lifting, as found most convenient, so as to give a clear depth of 4½ fathoms below low-water level.

Ironwork.

All ironwork must be well protected from rust by four coats of red-lead paint, or other coating approved by the Engineer.

Concrete.

All concrete in cement is to be formed, one part of the best Portland cement to two of sand and two of broken stone.

Wood work.

All wood work is to be of Moulmein teak, free from shakes, sap, and imperfections.

Workmanship.

All materials and workmanship shall be of the best character, and subject to the approval of the Engineer.

Faulty works.

The Contractor will be required to reconstruct faulty works, and to remove any materials deposited out of the line of Breakwater, if they shall, in the opinion of the Engineer, be considered to be detrimental to the harbour.

Setting out.

The Contractor will furnish all poles, pegs, materials, and labour for setting out the works.

Certificate

Payment shall be made monthly on the certificate of the Engineer, in accordance with a schedule prepared by the Director of Public Works and the Contractor, but subject to revision by the Consulting Engineer in case of dispute.

Measurement.

No materials will be paid for that are deposited outside the line of assumed section of the Breakwater—and no allowance will be made in the measurements for any materials deposited more than 200 feet in advance of that portion of the Breakwater that is so far constructed so as to rise above the surface of the water.

Payments.

The certificates of the Engineer will be sent in to Government on the 1st of each month, and payment made by Government, except in unavoidable cases of delay, within a week after the receipt of the Engineer's certificate.

Denomination of payment

Payments under the Contract, if made in England, will be made in British money sterling, and, if made in Ceylon, in rupees, at the rate of 10 rupees to one pound.

Certificate subject to revision.

All monthly payments are to be regarded as open payments of a provisional and approximate character, and subject to revision by the Engineer on any subsequent certificate.

Guarantee Fund.

In addition to any retention that may be made to repay advances for plant, 10 per cent. will be deducted from the amount certified by the Engineer as due to the Contractor, until such retention amounts to £10,000, which will be retained as a Guarantee fund for the due performance of the Contract, and invested in approved Government securities, of which the interest will be credited to the Contractor, until the Engineer has duly certified that the whole of the work has been satisfactorily completed.

Bankruptcy.

If the Contractor shall become bankrupt, or attempt to take the benefit of any Act for the relief of insolvent debtors; or shall fail to complete the works within the given time, or to make fair and reasonable progress, the Government may, at its option, either determine the Contract by paying the Contractor such sum as may be decided by the

Enclosure No. 3 in No 3.

Engineer to be fair and reasonable, after consideration of all the circumstances connected with the work, and the due completion thereof; or the Government may enter upon, and take over the work, plant, and materials into its own hands, and complete the works, and maintain them, at the risk and expense of the Contractor and his securities.

Date of completion

The whole of the works are to be completed within 4½ years from the date of signing the Contract, under a penalty of £25 per day for every day after that date that the works may remain incomplete.

Maintenance.

The Contractor must maintain the whole of the works in perfect order for the space of two years after the entire completion of the works has been certified by the Engineer, and must during that period remove or make good defects arising from any cause whatsoever.

Disputes.

In case any dispute shall arise between the Government and the Contractor on any subject relating to the Contract, the subject of such dispute shall, on the demand in writing of either party, be referred to the arbitration and award of the Consulting Engineer, whose award as arbitrator shall be final and without appeal.

Consulting Engineer.

The Government will appoint a competent English Civil Engineer to be the Consulting Engineer in the matter of this Contract, and if the Contractor should object to the person selected by Government, it shall be lawful for the Contractor to state his objection privately to the President for the time being of the Institution of Civil Engineers; and on the certificate of such President, that such objection is reasonable, the Government will thereupon nominate some other competent English Civil Engineer as Consulting Engineer.

Tenders to be binding for six months.

The tenders shall be binding for six months from the date fixed for the delivery at the Office of the Crown Agents, in order to give time for their transmission to Ceylon, should it be necessary; but any Contract signed by the Crown Agents for the Colonies, will be binding upon the Government of Ceylon.

Acceptance of tender

The Government does not bind itself to accept the lowest, or any other tender, and it shall be optional with the Government to accept the tender for the construction of the Eastern Breakwater alone, excluding any or all of the other items for which tenders have been invited.

Security.

The Contractor must furnish two good and approved persons as security, jointly and severally, for the amount of £15,000, for the due fulfilment of the Contract.

Formal Contract.

The Contractor must undertake, in the event of his tender being accepted, to execute a formal Contract for the due execution of the work, in accordance with the terms and spirit of this specification.

GUILFORD L. MOLESWORTH,
Director of Public Works.

LIST of Plans, Sections, and Drawings annexed to this Specification, and duly authenticated by the Director of Public Works for the Government of Ceylon.

Mark.	Description.
B/1.	General Plan, shewing position of Breakwaters.
B/2.	Longitudinal Sections of Breakwaters.
B/3 to B/16. inclusive.	14 sheets of Cross Sections of Breakwaters.
B/17.	Enlarged Section of Breakwater heads, shewing position of Harbour lights.
B/18.	Details of Harbour lights.
B/19.	Details of Beacons.
B/20.	Sections of Averea Rocks to be removed.
B/21.	Do. Catta Rocks do.
B/22	Assumed Sections of Breakwater.

GUILFORD L. MOLESWORTH.

Form of tender.

FORM OF TENDER.

I, , do hereby offer to construct and complete the Galle Harbour Improvement works, in accordance with the terms of the specification hereto attached, within four years and-a-half from the date of the acceptance of the tender, for the amount of £ , viz:—

For the Eastern Breakwater	£
For the Western do.	£
For the Harbour lights	£
For the removal of Rocks	£
For providing and and fixing eight Beacons	£
For the maintenance of the whole of the works for the term of two years after their completion	£
Total	£

And I undertake, in the event of my tender being accepted, to execute, when required, a

formal Contract, which shall embody such terms and conditions as may be required by the Ceylon Government for the due execution of the said works, in accordance with the terms and spirit of the specification; and I propose of and of as my securities jointly and severally to the amount of £15,000, for the due fulfilment of my Contract; and I hand herewith letters from the said , offering to enter into a bond to that effect, when called upon by the Ceylon Government to do so.

Enclosure No. 3 in No 3
Form of tender.

No. 4.

No 4.
Governor Sir H. Robinson to Earl Granville.

Governor Sir H. ROBINSON to EARL GRANVILLE.

No. 52.
Miscellaneous.

Queen's House, Galle,
Ceylon, 7th February, 1870.

MY LORD,

WITH reference to my Despatch No. 30 of the 22nd ultimo, respecting the steps to be taken for inviting tenders in England for the execution of the works contemplated for the improvement of the Galle Harbour, I have the honor to request that the Crown Agents may be instructed to submit to Mr. Molesworth, the Director of Public Works, who will proceed to England this month, the proof sheets of the specification for these works, before having them finally published; and that they may be authorized to allow him to make any minor alterations in practical detail which may appear to him to be desirable.

The Right Hon'ble
EARL GRANVILLE, K.G.

I have, &c.,
HERCULES ROBINSON.

No. 5.

No. 5.
Earl Granville to Governor Sir H. Robinson.

EARL GRANVILLE to Governor Sir H. ROBINSON.

No. 78.
Ceylon.

Downing Street,
8th April, 1870.

SIR,

I TRANSMIT to you for your information and guidance, and with reference to your Despatch No. 29 of the 22nd January, an extract of a letter from the Secretary to the Treasury, with copies of its enclosures, from which you will learn, that in the opinion of Counsel the Ordinance No. 2 of 1870, to provide for the improvement of the Galle Harbour, requires amendment, as it does not in its present shape embody the provisions of the Harbour of Galle Loan Act of 1869.

In amending the Ordinance it will be desirable, in order to prevent the occurrence of any difficulty in connection with the advancement of the money by the Public Works Loan Commissioners, that the words of the Imperial Act should be strictly followed; but in the event, which is of course not anticipated, of any special taxation becoming necessary for the repayment of the amount borrowed, and the interest thereon, it will be understood, that the Governor, although mentioned alone in the Act and Ordinance, will, in the usual course, consult his Council as to the particular form which such taxation should take.

I have, &c.,
GRANVILLE.

Governor
Sir H. ROBINSON,
&c. &c. &c.

Enclosure in No. 5.

Enclosure in No. 5.
Extract of a letter from Mr Stansfeld to the Under Secretary of State

EXTRACT of a LETTER from Mr. STANSFELD to the UNDER SECRETARY OF STATE, Colonial Office, dated Treasury, 4th April, 1870.

"THE Lords Commissioners of Her Majesty's Treasury have had before them Mr. Herbert's letter of the 7th ultimo, enclosing a copy of a Despatch from the Governor of Ceylon, with an Ordinance, No. 2 of 1870, to provide for the improvement of the Galle Harbour.

Their Lordships desire me to transmit to you herewith, to be laid before the Earl Granville, the accompanying copy of a letter of the 26th ultimo from the Public Works Loan Commissioners, and of its enclosure on this subject; and I am to request that the necessary instructions may be given to the Governor of Ceylon, in order that the Ordinance may be amended in accordance with the suggestions of Counsel."

GALLE HARBOUR.

FURTHER CORRESPONDENCE.

No. 5. Sub-Enclosure No. 1, in No. 5. Mr Willink to the Secretary, Treasury.

Sub-Enclosure No. 1, in No. 5.

Mr. WILLINK to the SECRETARY, Treasury.

Public Works' Loan Board.
3, Bank Buildings, London, E.C.,
26th March, 1870.

No. 73.
Harbour. *Galle Harbour, Ceylon.*

SIR,

I am directed to acknowledge the receipt of Mr Law's letter of 16th instant, transmitting copy of Ceylon Ordinance No. 2, 1870, to provide for the improvement of Galle Harbour, and requesting that the Lords Commissioners of Her Majesty's Treasury may be furnished with any observations this Board may wish to make thereon.

I am to acquaint you, for the information of their Lordships, that as this Board's Solicitors entertained doubts as to whether the Ordinance complied with the requirements of the Harbour of Galle Loan Act, 1869, the Public Works Loan Commissioners have considered it expedient to consult Counsel, copy of whose opinion is herein enclosed.

I have, &c.,
(Signed) W. W. WILLINK,
Secretary.

The SECRETARY,
Treasury.

Sub-Enclosure No. 2, in No. 5. Copy, Opinion.

Sub-Enclosure No. 2, in No. 5.

COPY, OPINION.

I am of opinion, that the Ordinance does not comply with the second or third conditions of the Harbour of Galle Act, 1869. The second condition requires that the Governor be enabled "by taxation in the Colony" to raise the additional sums required to repay principal and interest. The Ordinance only enables the Governor to raise Harbour dues. These dues do not ordinarily come under the term taxation; they are merely sums paid for the use of the harbour, and are moreover dependent on the harbour being used. If the harbour is not sufficiently resorted to, these dues will not suffice to pay principal and interest, and the Governor is not therefore, by the imposition of these dues, necessarily enabled to raise the sums required "to repay principal and interest." It is to be observed, that the charge on the revenue of the Colony imposed by the first condition, was not considered sufficient unless the Governor had power to add to that revenue, under the second condition, a sum sufficient to repay principal and interest. Again, the second condition requires, that the Governor, that is the Governor alone, be enabled, &c. The Ordinance only enables the Governor, with the advice of the "Executive Council," to levy dues. Assuming the dues to be equivalent to taxation, still, I apprehend the Governor, on his own mere motion, and without the assent of his Council, could not levy them. The second condition of clause 4, therefore, does not appear to be complied with in this respect.

Lastly, the moneys advanced are, by condition 3 of clause 4, required to be appropriated for the purpose of "improving and fortifying the harbour." The Ordinance appropriates the money for improving the harbour only, and none could be applied for "fortifying"

I think clause 3 of the Ordinance should, in strictness, have been "It shall be lawful for the Governor, *and he is hereby required* to issue his Warrant," &c., though perhaps under the circumstances the words "it shall be lawful" would be considered mandatory.

Under the Ordinance, as it stands, I think the Commissioners cannot make the advance.

(Signed) EDWD. P. WOLSTENHOLME.

2, Stone Buildings,
March 23, 1870.

No. 6 Governor Sir H. Robinson to Earl Granville.

No. 6.

Governor Sir H. ROBINSON to EARL GRANVILLE.

The Pavilion, Kandy,
28th May, 1870.

No. 130.

MY LORD,

I HAVE the honor to acknowledge the receipt of your Despatch No. 78 of the 8th April last, informing me, that in the opinion of Counsel, the Ordinance No. 2 of 1870, to provide for the improvement of Galle Harbour, does not in its present shape embody the provisions of the Harbour of Galle Loan Act of 1869.

2. It is considered by Counsel, that the security of the general revenue is not sufficient, under the Act, to enable the Loan Commissioners to make the advance; that Harbour dues do not come under the term "taxation;" and that amendments in the

Ordinance are needed, (1) empowering the Governor to raise, if necessary, by taxation, such additional sums as may be required to repay the principal and interest of the advances, and (2) authorizing the appropriation of the money advanced, not alone for improving, but for "improving and fortifying" the harbour of Galle.

3. It would be quite hopeless for me to seek the assent of the Legislative Council to amendments of such a nature, as they are manifestly opposed to the object and intention of the contracting parties, and are only required to bring the local Ordinance into unison with the erroneous phraseology of the Imperial Act.

4. In the Memorandum dated 29th April, 1869, which I submitted to your Lordship when I was in England, I stated that I thought it would be possible to raise a revenue from the shipping frequenting Galle Harbour, sufficient to pay 5 per cent. on the cost of the works, as well as the expense of maintenance. I added:—"This being so, I think that if the capital were forthcoming at a low rate of interest, I should be able to induce the Ceylon Government and Legislature to undertake the necessary works of improvement, and to borrow for the purpose a sum not exceeding, say £250,000, upon the security of the general revenue of the Colony,—the measures necessary for the taxation of the port being left for local arrangement."

5. The additional local taxation was suggested by me, not for the purpose of offering additional security to the Home Government, but to meet the objections which I knew would be raised in the Colony to any proposal for the improvement of Galle Harbour from the general revenue. I proposed therefore, that whilst the general revenue should be nominally charged with the annuity of 5 per cent. on the loan, or £12,500 a year, for 35 years, the local Government should be empowered to recover that amount, as well as the cost of maintenance, from the shipping interests more immediately interested in the undertaking. Considering that the Colony has a well secured revenue of about £1,100,000, which cannot be tampered with without the consent of the Home Government, and that the charges by permanent Ordinances upon this revenue amount only to £431,490, 16*s.* 0*d.** the offer of any additional security to the Home Government for a liability of £12,500 a year, would have been absurd.

6. Your Lordship was pleased to agree entirely in my proposal, and Sir Frederic Rogers, in his letter to the Treasury, dated 8th May, 1869, observed:—"Their Lordships will perceive that Sir H. Robinson is of opinion, that he will be able to induce the Ceylon Government to undertake the necessary works of improvement, and to borrow for the purpose a sum not exceeding £250,000 upon the security of the general revenue of the Colony, on condition that the money is advanced by the Public Works Loan Commissioners, and that the measures necessary for the taxation of the port are left for local arrangement. Lord Granville entirely agrees in Sir H. Robinson's proposal, and submits, for the sanction of the Treasury, his recommendation that, &c., &c."

See page 24 of Sessional Paper IX

7. The Lords of the Treasury would appear, from their reply of the 21st July 1869, to Sir F. Rogers, to have also concurred in the proposal; but in the letter which their Lordships addressed to Mr. Thring on the 20th July, desiring him to draft a Bill, he was directed, whether intentionally or inadvertently I cannot say, to insert a condition, the effect of which, it would now seem, is to alter the whole character of the proposal. It was simply intended, as I have shewn, that the Colonial Government should be permitted, if it saw fit, to levy Harbour dues with a view to re-coup the general revenue for any sums paid from it for the improvement of Galle Harbour; but the effect of the second condition of the Act, as worded, is, in the opinion of Counsel, to require that the Governor should be authorized, as collateral security for the loan, to impose, of his own mere motion, at any time he may think necessary during the next 35 years, additional general taxation to the extent of £12,500 a year, and to decide the form which such taxation should take

See page 25 Sessional Paper IX

8. I had considerable difficulty in getting the Legislative Council to agree at all to pledge the general revenue for the improvement of Galle Harbour, it being contended that the Harbour dues were the proper security, and that the effect of pledging the general revenue was simply to transfer the risk of loss, in the event of failure, from the Imperial to the Local Government. It would therefore be perfectly useless, as well as, I think, unreasonable, for me now to ask the Council, in addition to the ample security which has been provided, to clothe the Executive Government, in the manner proposed, with such unnecessary and unconstitutional powers.

9. As regards the objection taken by Counsel, that power is given by the Ordinance to the Governor, "with the advice of the Executive Council," to levy dues, whereas such power should, under the second condition of clause 4 of the Act, be invested in the Governor alone, I have to observe, that the latter provision would have been unprecedented in the legislation of the Colony, and contrary to its constitution, according to which the Governor is bound to consult his Executive Council on all matters of importance. It

See Royal Instructions

* Fixed Establishment Ordinance £213,490 16*s* 0*d*.
Military Contribution do. 160,000 0 0
Railway do. do. 58,000 0 0
Total.. £431,490 16 0

GALLE HARBOUR.

FURTHER CORRESPONDENCE

No 6
See page 25 of Sessional Paper IX.

would besides have been quite unnecessary, for the Executive Council in Ceylon is composed of Government officials who hold office under the Crown, and are bound to support the Governor, and obey the instructions of the Secretary of State. Mr. Law, in his instructions to Mr. Thring, referred to the enabling of the "Colonial Government" (not the Governor alone) to raise additional revenues. Mr. Thring, who is probably not acquainted with our forms, or with the constitution of the Colony, appears inadvertently to have inserted in the draft of the Bill the word "Governor."

10. Again, the words "and fortifying" were evidently inserted in the third condition of the Act through some further misapprehension on the part of Mr. Thring. Such a contingency as spending any part of the proposed loan on fortifications, was never contemplated, or even mooted, and would never have been agreed to. Throughout the correspondence the unprotected state of Galle Harbour is repeatedly referred to, but this is explained to mean the exposed and limited character of the anchorage, which is open to the South-West Monsoon, and to the heavy sea which accompanies it. The improvements proposed consist of a Breakwater for the protection of a certain area, and the removal of rocks within that area for the extension of the anchorage. When, therefore, Mr. Law, in his instructions to Mr. Thring, used the words "protection and improvement of the harbour at Galle" it is obvious, that what he meant was protection from the elements, and not from enemies. Mr. Thring appears however to have misunderstood him, and inserted the word "fortifying" in the Bill. When the Act was received in the Colony, the Government was at once questioned in Council on the point, and it was clear that it would have been fatal to the whole proposal if any attempt had been made to adopt the wording of the Imperial Act in this respect. I accordingly stated, what I believed to be the fact, that the word "fortifying" must have been inserted inadvertently, as I had never heard it even proposed to expend any portion of the loan upon such an object.

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11. For these reasons, it would be quite useless for me to apply to the Legislative Council to enact the amendments required in the local Ordinance, because such provisions would be inconsistent with the terms and conditions upon which it was understood the Home Government was willing to advance the money, and upon which alone the Colony would be willing to accept the loan. If, therefore, the discrepancies between the two enactments pointed out by Counsel cannot be overlooked, either the Imperial Act must be amended so as to represent correctly the agreement between the contracting parties, or the project must be allowed to fall to the ground. The only amendments necessary to bring the Act into conformity with the intention of both Governments, and to remove all the objections of the Loan Commissioners, will be to omit the second condition in the fourth clause, and the words "and fortifying" in the third.

Sessional Paper IX

12. I enclose, for facility of reference, a printed copy of the correspondence relating to the improvement of Galle Harbour, which was laid before the Legislative Council during the last Session.

I have, &c.,
HERCULES ROBINSON.

The Right Hon'ble
EARL GRANVILLE, K.G.

No. 7.

No 7
Earl Granville to Governor Sir H Robinson.

EARL GRANVILLE to Governor Sir H. ROBINSON.

Ceylon.
No. 132.

Downing Street,
7th June, 1870.

SIR,

Gov 28, Jan., 1870
„ 29, 22 „ „
„ 30, „ „ „
„ 52, 7 Feb. „

I TRANSMIT to you for your consideration, and with reference to the correspondence noted in the margin, copies of letters from Mr. C. Hutton Gregory and Colonel Clarke, embodying their observations upon the report of the Commission appointed by you to enquire into the proposed improvement of Galle Harbour.

G 3 May.
C 20 May.

These communications appear to me to demand the most careful consideration, and I concur in the opinion, that until the preliminary and experimental steps suggested in the joint Memorandum by Colonel Clarke and Mr. Gregory, of the 24th April, 1869, have been taken, it would be premature to invite tenders from English Contractors.

I have to add, that Mr Molesworth has seen this correspondence, and looking to the strong opinions expressed by Mr. Gregory and Colonel Clarke, he admits the necessity of obtaining the further information which in their Memorandum they recommended should be procured.

I have, &c.,
GRANVILLE.

Governor
Sir H. G. R. ROBINSON, K.C.M.G.,
&c., &c., &c.

Enclosure No. 1 in No. 7.

Mr. GREGORY to Mr. HERBERT.

(COPY.)

1, Delahay Street,
Westminster, 3rd May, 1870.

Galle Harbour Improvement.

SIR,

REFERRING to your letter of 15th March, 1870, in which you were so good as to inform me, that Earl Granville would be very glad to receive any remarks I might desire to offer on the Report of the Commission appointed by His Excellency the Governor of Ceylon, to enquire into the proposed improvement in Galle Harbour, I have now the honor to submit some observations for His Lordship's consideration, complying with the instructions given, that my observations should be furnished separately, and not in conjunction with Colonel Clarke.

(2.) But I beg leave first to call attention to the position in which this question stood, prior to the recent appointment of the Commission in Ceylon.

(3.) The improvement of Galle Harbour, mainly with the view of giving accommodation to the large ships whose use of the station was so greatly increasing, had been pressed upon the attention of the Imperial Government, and various plans had been proposed for this object.

(4.) On November 28th, 1866, the Earl of Carnarvon, then Secretary of State for the Colonies, recommended the question to the consideration of His Excellency Sir Hercules Robinson, the Governor of Ceylon, who, in a Despatch dated January 26th, 1867, intimated that all the information which had been obtained on the question, was to be found in papers laid before Parliament on August 7th, 1860, and May 13th, 1862. He added, that his Council did not consider that there was sufficient reliable data in those papers, upon which any definite conclusion could be arrived at on the subject, and that there was not in Ceylon the means, with their limited staff of Engineers, to obtain any more reliable reports. He therefore suggested, that the Secretary of State should procure in England the opinion of a competent Engineer as to the feasibility of improving and protecting the harbour, the best mode of carrying it out, and the cost of the work; pending the receipt of which information, the Government of Ceylon would be unable to come to a positive decision in reference to the project.

(5.) The Duke of Buckingham and Chandos, who succeeded the Earl of Carnarvon as Secretary of State, did me the honor to confide this investigation to me; and, having regard to the importance of the question, and the responsibility attaching to the professional advice I might give, and which I understood would decide the principles of construction of this important work, I set myself to collect from Ceylon, as well as in England, the best information I could obtain, to supplement that contained in the Parliamentary Papers above referred to; and at length, after much correspondence and most careful consideration, extending over a long period of time, I transmitted my report and drawings to Sir Frederic Rogers, the Under Secretary of State, on September 28th, 1868. At present I make no further reference to that report, excepting to call attention to my recommendation, that the work should be commenced by the Civil Engineer of the Colony, with the view, firstly, of establishing safe standards of price, and secondly, of acquiring information bearing on the details and ultimate conduct of the work. This advice was subsequently confirmed, and more fully explained, in the joint Memorandum of Colonel Clarke and myself, dated April 24th, 1869, to the origin of which I will now refer.

(6.) In the early part of 1869, I learned for the first time, from Governor Sir Hercules Robinson, who was then in England, that Colonel Clarke, C.B., Director of Works of the Admiralty, had made some plans for the improvement of Galle Harbour, which differed from mine. His Excellency intimated to me that the natural result of these differences would be indefinitely to delay the decision of a question of pressing importance, and he requested me to meet Colonel Clarke, and endeavour to agree with him on some joint recommendations, by which the difficulty might be overcome. After full consultation with the Governor on the recommendations to be made, I met Colonel Clarke, and settled with him the joint Memorandum of April 24th, 1869, which I had the satisfaction of believing received His Excellency's entire approval.

(7.) The joint Memorandum recommended, as the first works of improvement, the construction of an Eastern Breakwater, running out from Watering Point for a length of 700 to 724 yards; the formation of a road round the eastern side of the harbour; and the recovery of ground near the watering jetty, by filling in with quarry rubbish, with the addition, when judged necessary, of a pier or jetty, 15 yards wide and 200 yards long, north of the watering jetty, in the Eastern Harbour, as proposed in my report. My estimate for these works, amounting to a total of £279,269, was quoted as a sum which we both considered sufficient, but which Colonel Clarke thought might be materially diminished, be constructing the Breakwater, as shewn on his plans, with unselected "pierres perdues," a structure which he thought would be sufficient to resist the seas of the South-West Monsoon; adding his belief, that the selection of material, and the use of large concrete blocks, as proposed by me, might be found unnecessary.

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(8.) The Memorandum then pointed out the difference in our views, as to the direction of the Eastern Breakwater; that proposed by Colonel Clarke in 1865 being 700 yards long, and running out due west from the south side of Watering Point; while mine followed a direction somewhat north of west, having been laid out, not on the Admiralty Chart, but on the survey made by Mr. Royston. We recommended, that a new survey should be made across the mouth of the harbour, and that the exact position of the Breakwater should be fixed upon such survey, after further observations had been made on the ground by the Colonial Engineer.

(9.) With the view of obtaining accurate information for the guidance of future operations, and a closer estimate of cost, we recommended that the works should be commenced by the Public Works' Department, and that the Colonial Engineer should obtain such information as to the height, direction, and force of the waves, during the South-West Monsoon, as should, with the new survey, supply material for deciding the direction and section to be adopted for the Eastern Breakwater.

(10.) After indicating that the point of commencing the Eastern Breakwater would be affected by the means of access to the quarries, we recommended that they should at once be opened out, and experiments made to decide the proper extent and arrangement of blasting operations, and that the Eastern Breakwater should be commenced, for which purposes we intimated that a credit of (say) £25,000 would be necessary.

(11.) We suggested that the Engineer might fortify his investigations as to the exact direction of the Eastern Breakwater by the opinions of the most experienced Captains frequenting the port, from whom, at some future time, evidence might be sought which would be of use in deciding upon the necessity of ulterior works for the complete protection of the harbour, and their position, if necessary.

(12.) Lastly, we stated, that in commencing the works by the Public Works' Department, we thought it would be expedient to try two lengths of Breakwater, one of unselected stones, of the section proposed by Colonel Clarke, and the other of selected stones, of the section proposed by me, so as to test, by actual experience in this particular case, the comparative efficiency and cost of the two systems.

(13.) If these recommendations had been carried out to the full, they would have collected a mass of information, with the aid of which probably the work might with safety have been let by Contract, and at any rate the plan of ultimate operations might have been settled with something like certainty of success.

Reference to my original report will shew, that while I considered the Eastern Breakwater as the work which for a given expenditure would give the greatest amount of protection, I did not suppose it would give all the protection which would ultimately be required. I may add, that I joined in the recommendation to try Colonel Clarke's proposed section for the Breakwater, as well as my own, not from any want of confidence in what I had proposed, but in deference to his views, and feeling that the results of such a trial would be valuable; and I need not conceal a further motive—my desire to comply with the wishes of Sir Hercules Robinson, who considered that it would be for the public good that any professional differences of opinion should not prevent the commencement of the work.

(14.) On October 3rd, 1869, His Excellency the Governor of Ceylon, on the recommendation of Mr. Molesworth, the Director of Public Works and Civil Engineer of the Colony, appointed a Commission to consider and report on the proposed improvement of Galle Harbour. This Commission consisted of two Officers of Royal Engineers, four nautical gentlemen, and two Civil Engineers (one of whom, Mr. Harrison, had already proposed a plan, which was among those on which I had reported to the Secretary of State). The Commission sat for the first time on November 18th, 1869, when six of its number were present. Their Minutes state, that after reading the letter of appointment, they first took the evidence of four pilots on the direction of waves during the South-West Monsoon; they next read replies from five Captains of Steamers to enquiries which had been addressed to them the day before on the same subject; and they received from Mr Molesworth the result of ten observations on waves, taken between September 13th and November 16th, 1869. They afterwards decided, unanimously, the leading questions upon which their report was based; and finally received some extracts from the log of the Master Attendant. No entry appears on the Minutes of the time when the Commission received the Memorandum signed by Mr. Donnan and Mr. Blyth, but by its date it may be supposed to have been presented at the second sitting.

(15.) On Monday, November 22nd, 1869, the Commission sat for the second and last time. Seven members were present; a draft report was read, and carried unanimously. The eighth member, Mr. Harrison, Civil Engineer, was not present at either of the two sittings, but he signed on December 6th, 1869, a Memorandum setting forth some important points in which he differed from his colleagues; three of whom however made remarks in reply to his Memorandum, on December 9th, 1869.

(16.) As the report of the second day's sitting of the Commission gives no minute of any differences having arisen upon the draft report brought up on that day, but simply records its unanimous adoption, it may be assumed that, practically, one day's sitting, on November 18th, had enabled the six Commissioners present, viz., the Surveyor-General,

four nautical gentlemen, and one Civil Engineer, to read documents, take evidence, discuss all the points referred to them, and consider new designs and estimates. At any rate, the Commission found two sittings sufficient to investigate and finally settle, large questions of civil engineering design and construction, which during past years had occupied much time, and excited much difference of opinion, and which His Excellency the Governor had formerly thought could not be satisfactorily decided by authorities in Ceylon.

(17.) In considering the Report of the Commission, the first question which requires investigation is, the prevailing direction of the heaviest seas brought in by the South-Western Monsoon. Until recently it has, I believe, been almost universally considered that their direction was from a point varying but little from the South. The Report, paragraph 6, states, that "all the reliable evidence obtained by the Commission points to the conclusion, that the general direction of the heavy ocean swell outside the harbour varies from South-West to South-South-West, and that it only comes from due South after having passed the line between Polcatta rock and Watering Point. It may sometimes have a little more southing in it outside, but only on very rare occasions." Upon this conclusion the Commissioners condemn my plan for the Eastern Breakwater, and propose one whose direction shall be North-West by West ½ West.

(18.) I am at a loss to understand how such a conclusion could have been drawn from the evidence, which, however, is not unanimous. The nearest agreement is to be found in the evidence of the pilots, who, perhaps by their frequent experience and their special local responsibility, may be able to answer such a question off-hand more readily than captains of ships. Mr. Molesworth's few observations extended over too short a period to decide the question; and they were taken in September, October, and November. But it has been pointed out by Mr. Harrison, in his Memorandum, "that the heaviest swell sets into the Bay at the commencement of the South-West Monsoon, and frequently comes from the Southward."

(19.) In Mr. Harrison's Report on Galle Harbour Improvement, dated October 16th, 1858, speaking, as he said, from close observation of the sea during two South-West Monsoons, he stated that the sea rolled in heavily from the Southward from May to October, while the South-West Monsoon prevails, and also during April and November, the period of the change of the Monsoons. He pointed out, that the danger to shipping was not from the wind wave, but from the long ocean swell which heaved into the Bay during 8 months of the year, apparently unaffected by the local winds, from points varying between the South and South-West,—most heavily from the former; and he added, that in this conviction he was borne out by the opinions of all the Officers of the Royal or Mercantile Navy whom he had consulted. While preparing my Report of September 28th, 1868, I consulted, among others, Captain Lovell, the Nautical Inspector of the Peninsular and Oriental Steam Navigation Company. He believed the set of the heaviest seas at the harbour mouth during the South-West Monsoon to be from South to North, and he was in favour of an Eastern Breakwater running out from Watering Point in a Westerly direction, with a hollow cant on the sea side, to turn off waves from the entrance.

(20.) There seems to be a general agreement that the swell is directly from the South within the harbour and off the Polcatta rock; and if bound to decide the question now, without waiting for such observations as have been recommended by Colonel Clarke and myself, I should conclude, from the evidence given before the Commission, that in the position where I propose the Eastern Breakwater, the main set of heavy seas during the South-West Monsoon is from a point varying between the South and South-South-West, but that the heaviest come most frequently from between the South and South-by-West.

(21.) My proposed Eastern Breakwater starts in a direction W. by N. ½ N. at rather more than two-thirds of its length, partly to get into shallower water by making use of existing reefs, and partly to divert the incoming wave from the Eastern Harbour entrance. I designed it with two successive outward cants, so that its head would be slightly to the West of West-by-North, from its commencement. It appears to be considered, that the set of the sea is more nearly from the South as you leave the Watering Point and approach the Polcatta rock. I conclude therefore, that the most reliable evidence as to the run of the sea confirms the propriety of the position proposed by me for the Eastern Breakwater, both in its general direction, and in the changes in its direction before reaching the head; and, even if the set of the heavy seas be more from the West than the evidence now shews, the direction proposed by me would afford a large measure of protection.

(22.) The main difference between the Western Breakwater recommended by the Commissioners and that contemplated by me, is to be found in the greater length I have proposed. In my design for a complete scheme, the position of a Central, or detached Breakwater having been fixed with reference to the existing rocks, I proposed the extension of the Western Breakwater beyond the Polcatta rock, with the view of affording more complete protection to the Western Harbour entrance.

(23.) The Commissioners object to my proposed Central Breakwater, as "likely to create a swell across the entrance, which would be increased by the conformation of the Eastern Breakwater," and state, that "the double entrance would admit so much sea as to disturb the water inside the harbour."

(24.) I cannot admit the correctness of these observations of the Commissioners. On the contrary, I believe that the effect of the conformation of the heads of both Breakwaters

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would be to intercept and divide the waves as they arrive successively at each head; the recoil of the waves broken against the heads, and thrown back on the following waves, would cause a local disturbance close to the heads, but would limit the width of wave entering the harbour, and would leave the greater part of the fairway free from any special disturbance. As to the allegation, that the double entrance would admit so much sea as to disturb the water inside the harbour, I may observe that my entrances are proposed 700 and 650 feet wide respectively, and if the set of the heaviest seas should be so far from the South as S. by W. ½ W. the waves would pass both my entrances at an angle of about 45 degrees, and I believe that the effect of the sea would very soon be lost in the mass of water within the harbour.

(25.) If, however, the plan of the Commissioners should be adopted, there would be a total opening at one place of nearly 1,200 feet; and assuming the heavy seas at that point to run in directly from the South, which the Commissioners would probably allow, the whole of their entrance being north of the Polcatta, they would run in at an angle of 45 degrees with the opening. The effect of the angle formed by their Eastern Breakwater with the incoming swell, would be, that the waves would be heaped up to a great height by running along the outer face of the Breakwater, and the accumulated swell would be guided into the harbour. I cannot but conclude that this condition of affairs would cause a much greater total amount of disturbance within the harbour, than the sum of the disturbances within the harbour which would be due to my two entrances; and the accumulation of all the disturbance within the single large entrance proposed by the Commissioners would not be the less objectionable from its nearness to that part of the harbour likely still to be used by small vessels.

(26.) It may be observed, that the Commissioners in their report do not satisfactorily reply to the third enquiry in their letter of appointment, "whether the entrance will be such as to enable sailing ships as well as steamers to enter or leave the harbour at all times without difficulty." They state their opinion, that "the construction of their proposed Breakwaters will not increase the present difficulty experienced by sailing ships or steamers in entering or leaving the harbour." They omit any opinion as to the actual convenience, or otherwise, of that entrance, either as an entrance to the Western Harbour now used, or as an entrance to the protected Eastern Harbour.

(27.) I believe that the two openings proposed by me would offer greater facilities for ships entering and leaving the harbour in various states of wind than the Commissioners' one entrance, while the large steamers for whose accommodation the Eastern Harbour would be specially useful, would enter, and leave it, as designed by me, almost on one course, without the inconvenience which would be attached to the Commissioners' plan, from a large space in the Western Harbour being necessarily kept open and unoccupied for their passage, and without the trouble and possible danger which would be caused in the Commissioners' plan, by ships having to take a circuitous route among the rocks which divide the Eastern from the Western Harbour, whenever they entered or left the port.

(28.) I am surprised to observe the small extent to which the Commissioners propose to remove rocks from within the harbour. With every deference to the opinions of nautical gentlemen on such a question, I feel that the continued existence of many rocks must greatly diminish the space available for shipping purposes within the harbour; and remembering the loss of the "Malabar," with a cargo of nearly £400,000, by her stern cable parting during a North-East squall, in 1860, and her grounding on a well-known rock, I cannot but think the risk proposed to be run a very serious one. In confirmation of this view, I may quote the opinion of Captain Lovell, that all rocks north of the Breakwater should be blasted. Mr. Harrison's Memorandum expresses on this point a very marked difference from the other Commissioners.

(29.) The Commissioners condemn the section proposed by me for the Breakwaters, and propose for definite adoption, without trial, Breakwaters of unselected "pierres perdues," of a very scanty section as compared with what is generally adopted for such structures; – indeed, so scanty, that it is proposed that the inner and outer slopes should meet in a point, without any horizontal width of crest, and without protection even by large stones being selected for that position. I cannot think that such a section would stand in any exposed situation. The width of crest proposed by me is 20 feet, and that where the materials used are large blocks. Mr. Harrison, in his Report of 1858, proposed to protect the crest by masonry.

(30.) The Commissioners state their "opinion, that the increased cost arising from the manufacture of large blocks of béton, weighing from 9 to 15 tons, and also from the extra time and labour consumed in selecting the 1st, 2nd, &c., class of rubble, would more than counterbalance the saving to be effected by the adoption of the steep slopes proposed."

(31.) I believe I am right in stating, that Colonel Clarke's reason for proposing unselected "pierres perdues" was, that he thought I had overestimated the heaviness of the sea at Galle. I should willingly have left the comparative strength and cost of a Breakwater of unselected "pierres perdues," and of one of selected "pierres perdues" covered with blocks, to be tested by actual experience, as suggested in the Memorandum prepared by Colonel Clarke and myself, deferring the final decision of the section until after the observations as proposed; but as the Commissioners attack the principle of selection, it is right that I

should state, that I did not recommend the section proposed by me until its probable cost had been compared with that of one of unselected "pierres perdues," of what I considered would be adequate dimensions, and sufficiently protected.

(32.) I consider the use of a staging, with a proper number of railways upon it, to be desirable for the construction of the Eastern Breakwater, because without it the work cannot be carried out with the desired speed: in the event of any failure in the works it affords great facility for rapid repair, before serious damage has been done; and it is necessary for depositing the selected materials in their proper position. With such a staging the selections of stones in two or three sizes, and their arrangement in the Breakwater, need not cause much expense or loss of time.

(33.) Speaking generally, heavy stones cost more to move than light ones, because of the extra labour in lifting them into the waggons, and the expense of cranes and other appliances: but this expense must occur if large stones are used, whether they are selected or not. It costs very little more, in time or money, to put stones of one size into one set of waggons, and stones of another size into another set of waggons; the principal item of extra cost of selection being the employment of foremen to see it done, and to see that the trains of stones, so loaded and selected, are sent to the proper road, and tipped in the proper place.

(34.) I have already explained, in my first Report, the principles which govern the selection of stones, so as to place them in their right position, and at their proper slopes, and thus obtain at once economy and stability. I believe, that in such a situation as this, the distribution of stones so that the smaller ones may be in the hearting of the work, and the larger ones outside, and increasing in size as they rise within the influence of the waves, is the cheapest, as well as the most permanent arrangement, because the stones are so placed as to do the greatest amount of duty for a given quantity used. The use of unselected "pierres perdues" in an exposed situation involves the use of large stones in the inside and bottom of the work, where they are comparatively of little use, and the use of small stones in the outside and upper part of the work, where they are inadequate to resist the action of the waves; and while greater slopes, and therefore larger quantities of stones, are required, the same stability is not secured in the first construction.

(35.) In exposed situations the want of selection leads also to a greater cost in the maintenance, because, although unselected "pierres perdues" generally assume ultimately certain average slopes, they do not always assume them with regularity, but according to the direction of the wind and sea; large quantities of stone may be scooped out, and drawn away from the side or driven along the Breakwater, or the crest may be broken down and thrown inside the Breakwater. When once such action commences in a mass of unselected stones, no one can tell when it will cease, and the maintenance be brought within reasonable limits. For these contingencies a large per centage should be allowed, beyond the net measurements, for the stone which will be necessarily wasted and lost in forming and maintaining a Breakwater of unselected "pierres perdues;" but I do not find the Commissioners have made any adequate allowance for these contingencies.

(36.) When stones are properly selected, and the heaviest placed where the heaviest duty is to be done, and when the proper slopes due to the sizes of the stones are used, the slopes will undergo very little change, and such an allowance as 10 per cent. which I have put down for contingencies of construction, will be adequate, while the cost of maintenance will be very small.

(37.) In reference to the Commissioners' objection to the cost of béton blocks, weighing from 9 to 15 tons, the cost will no doubt be in excess of the cost of blasted stones: but, after making an adequate allowance for it, I have come to the conclusion, that it will be less than the cost of the greater quantity of stones which would otherwise be necessary, or than that of protection by built masonry.

(38.) The Commissioners "are moreover of opinion, that the manufacture of such large blocks of béton in Ceylon is impracticable, owing to the difficulty and cost of purchasing sufficient cement of good quality, and preserving it for use without deterioration, or of manufacturing it successfully in the country." On this objection, I may remark that I believe I have fully estimated the cost of importing the best Portland cement from England, and that I did not contemplate manufacturing it in the country. In answer to a letter addressed by me to Messrs. J. B. White and Brothers, the well-known Portland cement makers, they inform me, "We are in the habit of shipping considerable quantities of cement to India and other tropical climates, and we do not get complaints of any objection to the use of such cement, arising from the difficulty and cost of purchasing large quantities of good quality, and preserving it for use without deterioration." I have recently been informed that large béton blocks are being used at Bombay Harbour, although not as "pierres perdues."

(39.) Where "pierres perdues" unselected have been used for the formation of Breakwaters exposed to heavy seas, it has, I believe, been always found necessary, even when the Breakwaters were of ample cross section, to give them extra protection at the upper part within the influence of the waves, either by large stones or artificial blocks cast on roughly, or by paving or pitching on the crest and slopes, or by a built masonry top. In illustration of this, I will refer to two celebrated works, the Digue at Cherbourg, and the Breakwater at Plymouth.

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(40.) At Cherbourg the Dique was commenced with unselected "pierres perdues," allowed to take a natural slope. Between the years 1790 and 1832, the central portion was three times raised above high-water, and as often beaten down by the waves, until it was at last decided to lower it to low-water mark, and erect from that level a nearly vertical structure. The "pierres perdues" foundation had not however become perfectly consolidated so late as 1836, for even then, after a violent storm, many cracks shewed themselves in the superstructure, some of which were so serious as to require the replacement of a large quantity of masonry.

(41.) The Plymouth Breakwater has suffered very severely from gales, and notably in 1817 and 1853, and more recently, when great quantities of even large stones were washed over from the fore-shore to the inner side. Various additions have been made for the protection of the upper works, by pitching with masonry over the crest and down to low-water, outside and inside; many of the pitching stones being dove-tailed, and a wide term or bench being formed on the seaward side of the pitching, protected by a quantity of large rubble stones.

(42.) In a Report of the Commissioners appointed by the United States Government, to determine the design and construction of a Breakwater in Delaware Bay, which Report was adopted in 1829, and the work subsequently carried out accordingly, I find that the experience drawn from the Breakwaters at Cherbourg and Plymouth was made use of to decide the section of Breakwater. They reported that stones of small size are not sufficient to withstand even a moderate action of the waves; that stones measuring 18 to 24 cubic feet, and weighing 1½ to 2 tons, present a suitable resistance to a moderate sea; that larger blocks are required to withstand a violent sea, and that in the more exposed parts of the work their size should be still larger; that if small materials are used, it is indispensable to protect them externally by others of larger size; that the smaller the external surface of a large block, the greater will be its stability: and that the largest blocks should be placed towards the top.

(43.) Structures, protected with large blocks of béton, are to be seen of great age at Leghorn and Civita Vecchia. They were adopted by the French early in the present century, and have been largely and successfully carried out, with various modifications, generally in combination with selected stones, at Algiers, Marseilles, Cette, and other French ports. In a recent visit to Marseilles I carefully examined the mole of La Jolliette, the section of which is arranged on the principle whose adoption I recommend. Although erected in a very exposed situation, and subjected to the heavy action of the sea, I found the external concrete blocks in a very sound condition, without any sign of recent movement, while the excellent state of the parapet and quay walls, which had been built on the mole for commercial purposes, proved that the mole itself was practically solid, and had not suffered from any disturbing cause.

(44.) It appears, from a supplementary Report of Mr Molesworth's, that it is contemplated that the mass of the Breakwaters should be tipped from barges, the top being finished by tipping from waggons, without the use of any staging.

(45.) Until now, I do not remember having heard the formation of Breakwaters from barges, suggested as a cheaper and quicker process, in an exposed seaway, than tipping from waggons, where tipping is applicable. I always thought that detached Breakwaters were, as a general rule, admitted to be more expensive than others, because of the necessity of barging; and in my estimate I allowed for the materials of the detached Breakwater prices in excess of those assigned to the Eastern Breakwater. I am still of opinion, that if the use of barging is properly applicable at all to the Eastern Breakwater, it could only be so very partially.

(46.) If, as I suppose would be the natural course, all the stone is to be brought from the quarries to the barges by waggons on railways, what is to prevent waggons from conveying stone along a staging furnished with a sufficient number of distributing railways, at once, without waiting for the stone being loaded into barges, and the barges formed into trains and run out. The time required to form the Eastern Breakwater by barging would be very great, for it cannot be expected that barges can be used as waggons on staging could, through the greater part of the South-West Monsoon.

(47.) It appears from Mr. Harrison's Memorandum, that he was not admitted to the confidence of his brother Commissioners on this point. If he had been, he might have called their attention to the statement in his report of October 16, 1858, "that the weather for seven months in the year is such, that during that time there would be few days upon which a lighter, laden with stone, could cross the bay with safety."

(48.) In my original Report (paragraph 13) I thought it due to Mr. Molesworth to state, that he had suggested three Breakwaters, of which one should be detached. In a semi-official letter to the Governor's Private Secretary, in which he made that suggestion, he stated that the cost of a detached Breakwater would be somewhat increased by the work having to be done from barges, but he pointed out that both Breakwaters might be carried on simultaneously, and by a good system of barges he thought the isolated Breakwater might be executed during the calm weather of the North-East Monsoon, at very little additional cost per lineal yard. It appears that he then considered that barging would be more costly, and did not contemplate the possibility of its use during the South-

West Monsoon, so that he only proposed it when ordinary tipping could not be applied. I am at a loss to understand why he can now assert, that "it would be absurd to have recourse to the comparatively extravagant and slow process of tipping, further than may be necessary for completing those portions which cannot be deposited by lighters."

(49.) The Commissioners consider that no roads, wharves, jetties, or stores will be at present required. The time when the necessity for such works arise, can of course better be judged in Ceylon than in England, although of their ultimate necessity there can be no doubt; and I may here state that Captain Lovell expressed to me his belief, that while the Peninsular and Oriental Company would not at present desire a pier,—ground for coal sheds would be required on the east side of the Eastern Harbour when the Eastern Breakwater was made. As an engineering question, it is however right that I should observe, that while the Breakwater is being formed, the running out of quarry rubbish, and the soft material or capping overlying the stones, of which there will be a large quantity, so as to fill up shallow bights in the East Harbour, would be of small expense, compared to what the recovery of such land would be if executed independently, at a subsequent time.

(50.) The Commissioners' estimate for all the works proposed by them, is £250,000, including in that sum an allowance of 5 per cent. for extraordinary contingencies. From this estimate Mr. Harrison, in his Memorandum, dissents "most strongly." This estimate is based on a rate of 3*s*. 9*d*. per cubic yard, on the net measurement of the section proposed for the Breakwater, including interstices, but assuming that no more material than such net measurement will be required to complete the work; any excess from this cause not being apparently provided for, unless to the limited extent of the contingencies included in the rate of 3*s*. 9*d*. This rate also includes heads and lights, removal of rocks, erection of beacons, and all other costs of construction, besides all allowances for possible increase of prices, and for the barge work being interrupted by weather, if any such allowances have been made. The maintenance of the Breakwater for a period extending two years beyond the date when the whole shall be completed, is, I suppose, included in the 5 per cent. allowed for extraordinary contingencies. I have no hesitation in recording my opinion, that the estimate is entirely insufficient for the class of structure proposed.

(51.) I have endeavoured to reduce to a common measure this rate of 3*s*. 9*d*. set down by the Commissioners as the average of their whole work, as compared with the prices of my estimate, and I find that my estimate for the cheapest and smallest material in the heart of the Eastern Breakwater, is about the same rate as their average, while my average of all the work in the Breakwater, excluding the béton blocks, is very nearly double that rate. My rate for the detached Breakwater, where barges would be used, is of course greater.

(52.) The total length of the Breakwaters proposed by the Commissioners would be slightly in excess of those proposed by me; and I believe that the total cost and the total time required for their construction would not be less than those required for the Breakwaters proposed by me, if constructed of the same section, and by the same means in either case.

(53.) The Commissioners propose the immediate letting of the works, according to their design, as a guaranteed Contract. I greatly doubt if any Contractor of ability, experience, adequate capital, and "bona fides," would be disposed, with the present amount of information, and on the Commissioners' design, to enter into a guaranteed Contract at any amount, but if any "bonâ fide" offer were made, the amount proposed by any Contractor experienced in such work would certainly be greatly in excess of the estimate. An adequate tender, even if made by a respectable Contractor, could only lead to difficulty and loss, and I believe that offering this work for Contract now, even on a good design, would greatly increase the difficulty of letting it at a fair rate hereafter, on properly matured details and with full information, without which, I am justified in affirming, that no Contract will be safe to either of the contracting parties.

(54.) In concluding this Report, I abstain from all personal questions. In justice to myself, and in justice to the Secretary of State, who confided to me the duty of submitting to him a Report by which the future action of Government should be guided, I have thought it right to point out the errors of the very hasty recommendations of the Ceylon Commission. I feel it no less a duty to urge through you, very respectfully, but very earnestly, on the Secretary of State, that the Report of the Ceylon Commission should not be adopted, but that, deferring for a time, if desired, the construction of the pier and roads, the recommendations of the Memorandum of Colonel Clarke and myself should, in other respects, be carried out without further delay,—a decision by which much light may be thrown on a difficult question,—further information obtained, much of which is essential to ultimate success,—and no one pledged to any course but one of prudence and safety.

I have, &c.,

R. G. W. HERBERT, Esq., Colonial Office.

(Signed) CHARLES HUTTON GREGORY.

GALLE HARBOUR.

FURTHER CORRESPONDENCE.

No. 7. Enclosure No. 2 in No. 7. Colonel Clarke to the Under Secretary of State.

Enclosure No. 2 in No 7.

Colonel CLARKE to the UNDER SECRETARY OF STATE, Colonial Office.

(COPY.)

Director of Works of the Navy. No. 484.

Admiralty, Spring Garden Terrace, S.W., 20th May, 1870.

SIR,

WITH reference to your letter of the 12th instant and former correspondence on the improvement of Galle Harbour, having seen Mr. Gregory's report on the project, forwarded to Lord Granville by Sir Hercules Robinson, under cover of his Despatch of January 22nd, 1870, I do not think it now desirable to enter into any discussion on the differences of opinion that exist respecting the various designs or the details of their construction. I would only express my conviction, that the Western Breakwater should, when commenced, abut upon the south, or ocean side, of the White Tower, having its direction due east, and that the joint opinion given by Mr. Gregory and myself, in our Memorandum of 24th April, 1869, should be acted upon.

I have, &c.,

The UNDER SECRETARY OF STATE for the Colonies.

(Signed) ANDW. CLARKE.

No. 8. Governor Sir H. Robinson to Earl Granville.

No. 8.

Governor Sir H. ROBINSON to EARL GRANVILLE.

No. 166. *Miscellaneous.*

The Pavilion, Kandy, Ceylon, 22nd July, 1870.

MY LORD,

I HAVE the honor to acknowledge the receipt of your Despatch No. 132 of 7th June, enclosing copies of letters from Mr. Gregory and Colonel Clarke, upon the proposals of this Government for the improvement of Galle Harbour.

2. It appears to me that Mr. Gregory's letter is calculated to divert attention from the leading material features of the scheme to points of professional detail, many of which are at present of secondary importance; and I must therefore ask permission to state, as concisely as I can, the position in which the question stands at present, and the point which calls for the decision of Her Majesty's Government.

3. The improvement of Galle Harbour is a project to which the public of Ceylon is, if not opposed, at all events indifferent. It has been pressed upon the local Government for years by successive Secretaries of State, at the instigation of the powerful interests connected with Steam Navigation in the Eastern seas; but the same answer has always been given, that the work is not one to which, under existing circumstances, the revenues of the Colony can legitimately be applied. When, however, the Home Government lately offered to advance the necessary funds in return for an annuity of 5 per cent. for 35 years, and it was stated that the cost of the scheme might possibly be recovered from the vessels frequenting the port, it was generally felt and acknowledged, that if this latter point could be established, the Colony was bound to accept the management and responsibility of the undertaking.

4. A careful examination of the capabilities of the port for taxation shewed that the maximum revenue which could be raised from it would be about sufficient to provide for the maintenance and management of the harbour, and for the payment of 5 per cent. on a capital outlay of about £250,000. But it was shewn, that the possibility of levying the heavy dues proposed was contingent upon the harbour being made sufficiently smooth to enable vessels to lie alongside of piers, or wharves, or hulks, or even alongside of each other, for the purposes of coaling, and for the landing, shipping, and transshipping of cargoes.

5. The whole question therefore turns upon the possibility of (1) providing a smooth anchorage in all weathers, and (2) effecting this for about a quarter of a million sterling. If these two indispensable conditions cannot be secured, the project must be allowed to drop.

6. In Mr. Gregory's first Report he recommended the construction of three Breakwaters, viz., an Eastern, a Central, and a Western; and he estimated the cost of his scheme (exclusive of the cost of the removal of rocks from the interior of the harbour, and their formation into the Western Breakwater) at £424,000. It seems probable therefore, that the whole of Mr. Gregory's scheme could not be carried out for much under half a million sterling.

7. I found, however, that Colonel Clarke, R. E., the Director of Admiralty Works, differed widely in opinion from Mr. Gregory on many points, and that the former considered that an efficient, and a far less costly, scheme for the protection of Galle Harbour could be devised. I accordingly requested these two gentlemen to confer together on the

subject, which they did, and in their joint Memorandum, dated 24th April, 1869, they united in recommending, that in the first instance the Colony should confine itself to the construction of an Eastern Breakwater from Watering Point, of from 700 to 724 yards in length, and some minor works, such as land reclamation, roads, and a pier. Colonel Clarke, however, differed from Mr. Gregory as to the character of the Breakwater required. He considered Mr. Gregory's plan needlessly strong and costly, and was of opinion that a Breakwater of "pierres perdues" unselected, 700 yards in length,—the cost of which he estimated at £120,000,—would be sufficient. Mr. Gregory, on the other hand, estimated his Eastern Breakwater, of 724 yards, at £216,000, which, with the minor works recommended by him, made up a total of £279,268.

8. When these proposals were made public in the Colony, a very general opinion appeared to be entertained by all practical and professional persons who had considered the question, that (apart from all differences of opinion between Mr. Gregory and Colonel Clarke) no Breakwater from Watering Point of about 700 yards, in any direction whatever, would be sufficient to secure the smoothness, which was one of the indispensable conditions of the scheme. This opinion was confirmed by observations taken on the spot by the Director of Public Works, who recommended, in consequence, the appointment of a mixed Commission of nautical gentlemen and Engineers, to consider whether either of the Breakwaters recommended by Mr. Gregory and Colonel Clarke would give the smoothness required, and, if not, whether that condition could be secured by any extension of either of the schemes proposed, within the limits of the second indispensable condition, viz., a cost of about a quarter of a million sterling.

9. A Commission was accordingly appointed to consider these points, consisting of four Engineers and four nautical men,—two of the latter being the representatives at Galle of the Peninsular and Oriental, and the Messageries Impériales Steam Navigation Companies, the parties most interested in the improvement of the harbour. The Commission was unanimously of opinion, that although an Eastern Breakwater of about 700 yards might secure tolerably safe anchorage, it would not produce that smoothness of water without which the increased dues could not be levied. It was considered that this condition could be effectually secured by extending the Eastern Breakwater to 1,310 yards, and by constructing, in addition, the Western Breakwater recommended by Colonel Clarke. The Commission further unanimously adopted the section of Breakwater suggested by Colonel Clarke, of "pierres perdues" unselected. But, as regards the second condition of cost, whilst seven of the Commissioners were of opinion that the works recommended by them could be executed for £250,000, one maintained that they could not be carried out for less than £386,000.

10. With these opinions before them the Legislative Council, after much hesitation, and indeed, I may say with reluctance, passed the Galle Harbour Ordinance,—the un-official members uniting in a strong recommendation, that the works should not be proceeded with unless a Contractor could be found to undertake them for about a quarter of a million sterling, as they considered, that if the project were either undertaken, or even commenced by the Public Works Department, the result would be a wasteful and valueless expenditure of public money.

11. In this view Mr. Molesworth, the Director of Public Works, subsequently coincided. His Department has already as much on hand as it can possibly attend to for years to come; and before a work like Galle Harbour could be undertaken, a separate establishment would have to be organized, and labour imported both from England and India. Whilst, if the experiment were to be of any value as a test of cost, it would have to be carried out on a scale, and with appliances, which would involve an expenditure of a very large sum of money,—probably not less than £50,000.

12. This Government accordingly determined, that the only mode of testing the feasibility of carrying out the required works for the money available, was to invite tenders; and surveys, plans, and specifications were sent home, which were supposed to contain all the information necessary to enable persons, desirous to contract for the works, to submit proposals.

13. The project at this stage having been again referred to Mr. Gregory, he, in his present letter, enters into an elaborate criticism of the proceedings and recommendations of the Commission, with a view of establishing the superiority of his own original proposals. But it is not between Mr. Gregory and the Commission that the Government is at present called on to decide. Whether there should be an Eastern Breakwater, 1310 yards long, as recommended by the Commission, or Eastern and Central Breakwaters, together 1,111 yards in length, as proposed by Mr. Gregory, or whether the Breakwater should be straight, as recommended by the Commission, or formed of re-entering angles, as planned by Mr. Gregory, are not the real questions at issue at the present stage of the inquiry. The question which has now to be decided, and on which the feasibility of the work turns, is the character, or section as it is termed, of the Breakwater; and the difference of opinion here is between Mr. Gregory and Colonel Clarke, and not between Mr. Gregory and the Commission. The Commission merely adopted Colonel Clarke's section for a Breakwater of "pierres perdues" unselected, estimating the cost of it at 3*s*. 9*d*. per cubic yard, instead of 2*s*. 9*d*., the amount considered sufficient by that gentleman. Mr. Gregory maintains, that

GALLE HARBOUR.

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No 8. Governor Sir H. Robinson to Earl Granville.

such a Breakwater would be inadequate to resist the force of the sea at Galle, and that the cost of it is considerably under-estimated by the Commission. He prefers his own design of a Breakwater, composed of rubble, selected into three classes, and covered from 12 feet below low-water upwards with a capping of large artificial concreted blocks, weighing from 9 to 15 tons; and he recommends that the relative efficiency and economy of the two systems should be tested by the local Government constructing lengths of 100 feet of each, run out from Watering Point.

14. It appears to me that it would be quite useless to make any commencement upon Mr. Gregory's plan, because, if his view as to the description of Breakwater required be correct, the whole project at once falls to the ground, as it would be impossible, by his own shewing, to shelter the harbour by means of Breakwaters of such a construction for less than about £500,000; and this Government has determined not to make a beginning unless it can be shewn that there is a probability of the work being executed for £250,000 or thereabouts. It appears to me also to be equally unnecessary and undesirable, in the present position of the question, for the Public Works Department to commence upon Colonel Clarke's plan;—undesirable, because to afford any criterion as to the cost of the whole work, the experiment would have to be carried out on a scale which would involve an outlay far beyond what the Government is prepared to risk;—and unnecessary, because it is believed that the stability of a Breakwater of the type recommended by Colonel Clarke, and its power to withstand a wave of the height and force of that known to enter Galle Harbour during the South-West Monsoon, are not problems which remain to be solved by experiments in Ceylon.

15. The question therefore to be decided by Her Majesty's Government, is a very simple one. If they are satisfied as to the soundness of Mr. Gregory's views, the indispensable conditions of smoothness for a sum of from £250,000 to £300,000 are unattainable, and the project may be abandoned.

16. If, on the other hand, it is thought that there may be something in the more simple and less costly plan recommended by Colonel Clarke (in the sufficiency of which, I have been led to understand, Sir John Rennie, Mr. Murray, C.E., Mr Coode, the Engineer of Portland, Mr. Neville, the Engineer of Plymouth, and others with long experience in these especial works, entirely concur), I would suggest that Colonel Clarke might be asked to refer the question for the opinion of the best Engineer he can select, who has had special experience of Harbour Works. The Engineer so selected might, if thought necessary, be allowed to visit Ceylon before the close of the South-West Monsoon, and this Government would be willing to incur any expenditure, not exceeding £1,000, which Colonel Clarke might consider necessary for the definite settlement in this manner of the question in dispute.

17. If the sufficiency of a Breakwater of "pierres perdues" unselected, of the section proposed by Colonel Clarke, were once acknowledged, there ought to be no difficulty in ascertaining whether a Contractor can or cannot be found to tender for the work at about the Commissioners' estimate of 3*s*. 9*d*. per cubic yard.

I have, &c.,
HERCULES ROBINSON.

The Right Hon'ble
EARL GRANVILLE, K.G.,

P.S.— I send this Despatch viâ Marseilles, to save a week; because, if it be determined to send out an Engineer, it is desirable that he should arrive here by the latter part of September or the beginning of October, while the South-West Monsoon is still blowing fresh.

I enclose, for facility of reference, a small plan, shewing the position of the several Breakwaters proposed for the improvement of Galle Harbour.

H. R.

No. 9.

Earl of Kimberley to Governor Sir H. Robinson.

No. 9.

EARL OF KIMBERLEY to Governor Sir H. ROBINSON.

CEYLON.
No. 80.

Downing Street,
19th October, 1870.

SIR,

Colonial Office 13th Sept., 1870.

20th Sept., 1870.

WITH reference to your Despatch No. 166 of the 2nd July last, and to previous correspondence respecting the proposed improvement of Galle Harbour, I transmit to you, herewith, a copy of a letter which I caused to be addressed on the subject to the Board of Trade, and of the reply received from that Department. The Board of Trade as you will observe, express a strong opinion against the expediency of attempting to construct the Breakwaters on the less expensive and less substantial system, and after giving careful consideration to the question, I feel compelled to withhold my sanction from any immediate prosecution of the proposed improvements. You have shewn in your Despatch above referred to, that "the whole question turns upon the possibility of providing a smooth anchorage in all weathers for about £250,000," the people of the

Colony being, "if not opposed, at all events indifferent to the project;" and the Government having "determined not to make a beginning unless it can be shewn that there is a probability of the work being executed for the above-named sum or thereabouts." But looking to the experience in this country of the endurance of Breakwaters, I cannot doubt that the Board of Trade have exercised a sound judgment in recommending that the works at Galle should be of a thoroughly solid and stable character, and therefore necessarily more costly.

As therefore I cannot sanction the commencement of works on the cheaper plan, there would appear to be no advantage in instituting at the present moment any further local enquiry under an Engineer sent from England for the purpose.

The question of affording better accommodation to the Shipping calling at Ceylon must, it seems, be entirely reconsidered, and those principally concerned in the matter will have to inquire whether, if works as extensive as have been contemplated are still found to be essential, contributions can be procured from other quarters to supplement the provision made by the Ceylon Government.

The Admiralty, writing to my predecessor in 1865, said that "the over-crowded and unsheltered anchorage at Point-de-Galle can only be remedied by the construction of a Breakwater at an enormous expense, or by the removal of the Packet Station to Trincomalee, distant 260 miles from it. The latter measure would have the effect of adding nearly two days to the time occupied in conveying the mails to and from Australia."

I do not find among any of the papers relating to Galle Harbour, any statement of the opinions that may have been entertained, as to the practicability or otherwise, of further using the Harbour of Trincomalee, and I should be glad to know whether there is, in your opinion, any prospect of an increased proportion of the shipping resorting to Ceylon making use of that excellent natural harbour, and whether the extension of the Railway to that port might not have the effect of diverting to it some of the local trade.

I have, &c.,
KIMBERLEY.

Governor
Sir HERCULES ROBINSON, K.C.M.G.,
&c., &c., &c.

Enclosure No. 1 in No. 9.

Enclosure No. 1 in No. 9
Mr. Herbert to the Board of Trade.

Mr. HERBERT to the BOARD OF TRADE.

(COPY.)

Downing Street,
13th September, 1870.

SIR,

THE question of the improvement of the Harbour of Galle in Ceylon has for some time been the subject of much correspondence and consideration, and has now arrived at a point at which the Earl of Kimberley would be very glad to have the benefit of the assistance of the Board of Trade.

I am accordingly to transmit to you, for the consideration of the Board of Trade, the following correspondence:—

1.—The Earl of Carnarvon to the Governor of Ceylon, dated 28th November 1866. — See page 1 of Printed paper marked A
2.—Sir Hercules Robinson in reply. — Page 2
3.—Report from Mr. Charles Hutton Gregory. — 28th Sept. 1868, p. 7
4.—Memorandum by Sir H. Robinson, with Enclosures. — Page 17.
5.—Memorandum by Messrs. Donnan and Halliley. — Page 27
6.—Two Despatches from Sir Hercules Robinson, No 28, with a Report from a Commission he had appointed to consider the scheme of Mr. Gregory and Colonel Clarke; No. 30, requesting that the Crown Agents might be instructed to invite Tenders for the execution of the works contemplated. — No 28, 22nd Jan., 1870 / No. 30, 22nd Jan., 1870.
7.—Report from Mr. Gregory, to whom the above report was referred. — 3rd May, 1870.
8.—Colonial Office to Colonel Clarke. — 12th May, 1870.
9.—Colonel Clarke in reply — 20th May, 1870
10.—I am also to transmit certain Plans, which are the property of Mr. Gregory, C. E., and of which you are requested to cause every care to be taken.
11.—Sir Hercules Robinson, 22nd July, 1870, No. 166.

The English and Colonial Authorities to whom the subject has been referred having, as the Board of Trade will perceive, failed to agree upon any one mode of procedure, Lord Kimberley considers that the most satisfactory way in which he can deal with a matter involving technical questions, apparently of much importance, will be by seeking the advice of the Board of Trade; and His Lordship will be obliged to them for their opinion generally upon the whole case, and particularly upon the following points:

1.—Whether in their opinion Breakwaters of unselected "pierres perdues" can or cannot be relied upon, as strong enough to withstand the seas to which Galle Harbour is exposed.

GALLE HARBOUR.

FURTHER CORRESPONDENCE.

No. 9. Enclosure No. 1 in No. 9. Mr. Herbert to the Board of Trade.

2.—If they think that form of construction admissible, whether they are prepared to say, without further enquiry on the spot, which of the three proposed plans is the best, and whether really sufficient and permanent works can be constructed within £250,000.

3.—If they are able to advise that either plan can be immediately proceeded with, whether the surveys, plans and specifications sent home are sufficient to enable Tenders to be called for, and whether confidence could be felt that a Contractor tendering within the sum specified could carry out the whole thoroughly and well.

In the event of the Board of Trade thinking it essential to have a further report from an Engineer sent out to Ceylon, it will be observed that in order to make satisfactory observations he would have to be at Galle by the beginning of October at latest, which does not appear practicable this year; and I am to add that if there is any serious doubt, it seems to Lord Kimberley better, if necessary, to wait a year, than to embark on so costly a work without sufficient information.

Colonel Clarke and Mr. Gregory would no doubt readily furnish the Board of Trade with any explanations necessary for the more complete understanding of their views. Should the Board of Trade desire to call in the professional assistance of a Civil Engineer to advise with them in London, reasonable remuneration would be payable out of Colonial funds; but Lord Kimberley is disposed to hope that the Board of Trade will find the amount of scientific opinion already collected sufficient to enable them to determine the course that should be followed.

I have, &c.,

(Signed.) R. G. W. HERBERT.

The ASSISTANT SECRETARY,
Harbour Department,
Board of Trade.

Enclosure No 2 in No. 9. Mr. Malcolm to the Under Secretary, Colonial Office.

Enclosure No. 2 in No. 9.

Mr. MALCOLM to the UNDER SECRETARY, Colonial Office.

(COPY.)

Board of Trade,
Harbour Department, Whitehall Gardens, S. W.
20th September, 1870.

SIR,

I AM directed by the Board of Trade to acknowledge the receipt of your letter of the 13th instant, and its enclosures, on the subject of the improvement of the Harbour of Galle in Ceylon; and of your further letter of yesterday's date, enclosing an extract from a Telegram from the Governor of Ceylon to the Earl of Kimberley, stating that the Session opens on the 28th instant, and that it would be satisfactory if he could announce the decision of Her Majesty's Government as to Galle Harbour.

From your letter of the 13th instant it appears that in consequence of the English and Colonial authorities, to whom the subject has been referred, having failed to agree upon any one mode of procedure, Lord Kimberley had considered that the most satisfactory way to deal with the case would be by obtaining the advice of this Board, upon the following points:

1.—Whether Breakwaters of unselected "pierres perdues" can or cannot be relied upon, as strong enough to withstand the seas to which Galle Harbour is exposed.

2.—Whether assuming that form of construction admissible, the Board of Trade are prepared to say, without further enquiry on the spot, which of the three proposed plans is the best, and whether really sufficient and permanent works can be constructed within £250,000.

3.—Whether assuming that this Board are able to advise that either plan can be immediately proceeded with—the Surveys, Plans and Specifications sent home are sufficient to enable Tenders to be called for, and whether confidence could be felt that a Contractor tendering within the sum specified could carry out the whole thoroughly and well.

The Board of Trade have given the questions enumerated above their careful consideration, and direct me to reply as follows:—

As regards the first question, the Board consider that ample proof has been given (at Plymouth, Alderney, and Cherbourg) that the "pierres perdues" system of constructing Breakwaters, although apparently economical, is really in the long-run both expensive and ineffective.

From the Plans which are now submitted for the works at Galle, it appears that an intermediate system between the "pierres perdues" bank and vertical wall Breakwaters, is adopted. This appears to be an improvement on the "pierres perdues" alone, inasmuch as the sea face slope is steeper, and the upper surface of stones being packed or built, the interstices between them are small, and exclude the sea better. Such a system apparently would prove satisfactory for places like Portland, where the full power of the ocean swell is never felt.

But for Galle, the Board of Trade would recommend a solid-built vertical wall, as the best and cheapest style of Breakwater.

As regards the second question, it seems that the Western Breakwater would be the easiest and the cheapest to construct, and that—when completed—it would prove the most useful in sheltering the anchorage and landing place. There can be no doubt that the solid vertical wall Breakwater should be adopted here over the shoal water, and if it were to be the first part of the work taken up, experience would be gained during its construction which might determine how far the same plan could be profitably extended.

The Board of Trade, with their present information, are unable to offer an opinion as to the probable cost.

As regards the third question, it appears to this Board, so far as they can judge from the data now before them, that the construction of the Western Breakwater, on a modification of Mr. Gregory's plan, might at once be commenced, the other proposed works being for the present left in abeyance. The Board of Trade can offer no opinion upon the latter part of the question.

With regard to the concluding observations in your letter, respecting the employment of a Civil Engineer in this country to assist the Board of Trade with his advice upon this matter, I am to state, that this Board are not aware that there would be any advantage in asking for the advice of an Engineer unacquainted with the locality; and they consider that the information already available is quite sufficient to enable the scientific gentlemen who have taken up the subject to come to a mutual agreement as to a safe plan for the Western Breakwater.

The Board of Trade fully concur with Lord Kimberley, in thinking that if any serious doubt still exists as to the scheme to be adopted, it will be better to wait a year, than to embark prematurely upon so costly a work without sufficient information.

In conclusion, I am to observe that, in offering the above remarks, the Board of Trade have been desirous of giving the Colonial Authorities the benefit of the experience they have had as to the construction and efficiency of Harbour works in this country, and they will be glad at any time further to assist the Colonial authorities in coming to a conclusion as to the mode of proceeding in the present case; but while doing so, they wish it to be understood, that the ultimate decision and responsibility will rest with the Colonial authorities, and not with Her Majesty's Government.

I have, &c.,
(Signed) W. R. MALCOLM.

The UNDER SECRETARY OF STATE,
Colonial Office.

P. S.—The Papers and Plans accompanying your letter are herewith returned.

VII.

THE

TWENTY-SEVENTH REPORT

OF THE

DEPARTMENT OF PUBLIC INSTRUCTION.

1869—1870.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
PRINTED BY WILLIAM SKEEN, GOVERNMENT PRINTER,
CEYLON.

1870.

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PUBLIC INSTRUCTION.

REPORT.

I HAVE the honor to submit to the Legislative Council the usual Financial and Statistical details of this Department, corrected up to the 30th December, 1869, together with a brief sketch of subsequent operations.

2. This arrangement is in conformity with the plan upon which the Education Reports were prepared by the Central School Commission. In future, the Annual Reports of this Department will exhibit a uniform history of financial and administrative details from January 1st to December 31st in each year, and will be published with the other Administration Reports issued by Government in the year following.

3. On the 31st December, 1869, there were 120 Government Schools in operation, numbering on the rolls at that date 7,156 pupils, with an average attendance during the year of 5,781.

4. The per-centage of Scholars, who at the close of the year 1869 had attended the same Government Schools, for periods varying from less than one year to more than five years, is as follows:

Less than one year.	One year, and less than two years.	Two years and less than three years.	Three years, and less than four years.	Four years, and less than five years.	Five years, and upwards
38·76	26·13	16·08	8·48	4 72	5 81

5. The per-centage of pupils of the different ages from "under five" to "over fifteen" in the different classes of Schools, is shewn in the following Table:

SCHOOLS	Under five years.	Between five and six years.	Between six and seven years.	Between seven and eight years.	Between eight and nine years.	Between nine and ten years.	Between ten and eleven years.	Between eleven and twelve years.	Between twelve and thirteen years	Between thirteen and fourteen years.	Between fourteen and fifteen years.	Over fifteen years.
Colombo Academy.....	...	...	...	·62	1 57	1·57	4·40	9 74	12·89	17 61	14·46	37·10
English Schools.....	·18	·85	1·32	3·78	6·52	10·11	9 35	11·43	14·65	12·19	10·96	18·62
Anglo-Vernacular Schools ...	·05	·46	1 69	4·14	5·37	8·0	11·39	11·62	10·74	9 28	7 47	29·78
Vernacular Schools	·43	1·38	5·22	9·47	14·27	15·81	16·25	12	9 97	6·37	3·87	4·92
English Schools (Female)....	2·35	6·48	9·14	10·91	9·73	13 56	10·91	9·43	11·79	7·37	5·30	2 94
Anglo-Vernacular Schools(do.)	1·53	7·69	13·84	9 74	13·33	12·30	10·76	8·71	7·69	4·10	6·66	3·58
Vernacular Schools (do)	1·40	3·87	12·5	11·97	16·90	17·78	13·20	11 26	4·75	4·22	1 05	1 05
Total—	·48	1·63	4·56	7·23	10·39	12·42	12 89	11·45	10·59	8·24	6·16	13 90

6. The expenditure on account of Education in the year 1869, amounted to £16,466 18*s.* 1½*d.*, shewing an increase of £300 18*s.* 0½*d.* as contrasted with 1868, when the expenditure amounted to £16,166 0*s.* 1*d.*

The following Table will shew the amount voted, and the amount expended, on account of Education during each of the last five years:—

Years.	Voted. £	s.	d.	Expended. £	s.	d.
1865 ..	17,389	3	9	14,673	13	1
1866 ..	17,339	2	8	14,875	5	1¾
1867 .	17,802	0	8	15,301	16	3¾
1868 ..	18,581	13	0	16,166	0	1
1869 ..	20,618	8	0	16,466	18	1½

7. The amount realized by School Fees in 1869 was £2,468 19*s.* 8*d.*, to which must be added £86 19*s.* 9*d.*, being receipts on account of Stationery, shewing a decrease in the receipts from Schools in 1869, as compared with 1868, of £173 0*s.* 2*d.*

8. The amount of Grants made to Private and Mission Schools during the year 1869 was £1,120 8*s.* 4*d.*, being at the rate of £0 14*s* 0½*d.* per head upon the number of pupils (1,595) under instruction in such Schools.

9. Since the date of the last Report, the following Schools have been closed:—the Náwalapitiya Anglo-Vernacular Boys' School, and the Maturata Vernacular Boys' School.

10. The results of the eighth Local Examination, together with the Examiner's Report thereon, will be found in the Appendix.

11. Financial and Statistical Returns, prepared upon the plan adopted by the School Commission, will also be found in the Appendices.

12. My thanks are due to the several Government Agents and their Assistants, for their aid in reference to the Schools in their respective Districts.

13. To the above statement of particulars, given in the accustomed form, I have now to add a brief account of more recent operations of a date subsequent to the supercession of the School Commission by a Department of Public Instruction.

14. Of these, the most important is the introduction of an entirely new scheme of Grants-in-aid, based upon a system of payment by results. The Rules and Regulations embodying this scheme received the sanction of Government, and were communicated to Managers of schools and to the public, toward the close of 1869. They will be found in the Appendix to this Report. In my Report for 1870 I shall be able to enter fully into the practical working of the system, with the aid of twelve months' experience of its effects; but I may here state by anticipation, that the results already achieved encourage a hope that it will succeed in securing the objects for which it was designed, and will largely contribute towards the extension and improvement of elementary instruction amongst the masses of the community.

15. A Normal School for the training of Teachers has been established in the building and premises of the old Industrial School, and Mr. J. Hill, late Head Master of the Kandy Central School, has been entrusted with the charge of it. A beginning has been made with an English class of ten, and a Vernacular class of twenty students, who were selected by examination from a large number of candidates.

16. The extension of elementary instruction, one of the primary objects of the Grant scheme, is being further promoted by the establishment of new Village Schools, between 35 and 40 of which will be opened in the course of the year 1870.

17. The severance, by act of the Legislative Council, of the connection between the University of Calcutta and the Colombo Academy, has necessitated a complete reorganization of the latter institution, particulars of which, within the limits of the period dealt with in this Report, will be found in the Appendix.

18. The next Report which I shall have the honor to submit, will contain, in a revised form, a full account of the operations of this Department for 1870, and will be submitted to Government early in 1871.

WALTER J. SENDALL,
Director of Public Instruction.

Office of Public Instruction,
Colombo 14th November, 1870.

APPENDIX A.

I.—Report upon the Local Examination, December, 1869.

II.—Report upon the Turnour Prize Examination, 1870.

III.—Subjects of Examination for the Mathematical Prize, July, 1871.

IV.—Notification establishing Local Examinations.

V.—Regulations for the Local Examination of Ceylon Students.—1870.

VI.—Nominal List of the successful Candidates for the Mathematical and Turnour Prizes, from 1846 to 1870.

VII.—Nominal List of Senior and Junior Queen's Scholars from 1862 to 1869.

APPENDIX A.—I.

REPORT *of* REV. J. B. H. BAILEY *upon the Local Examination*, 1869.

SIR,

I HAVE the honor to submit my Report on the Local Examination held in December, 1869.

The number of competing Schools was 13. The number of names sent in was 64. Of these, four did not present themselves at the Examination; and the numbers actually examined were, six for a Certificate, and fifty-four for the Preliminary Part.

Two of the candidates for a Certificate were successful.

Of those examined for the Preliminary Part, 24 passed, and 30 failed.

I regret to state that the Arithmetic papers still continue to be the weakest part of the Examination. In the preliminary paper the first eight questions involved only ordinary operations in the four Simple and four Compound Rules; and a note was attached to the paper, to the effect that in order to pass, it was necessary that correct answers should be given to at least six of these eight questions. The extent of the failure in this subject may be gathered from the fact, that twenty-six, being nearly one-half, of the candidates failed to fulfil this condition, and so were shut out from the rest of the Examination; while only five obtained full marks for the whole of the eight questions, being as nearly as possible in the proportion of one in eleven. The failures occur in all the Rules, varying from three in Simple Subtraction to twenty-two in Compound Multiplication. Some of the mistakes are trifling of course, but it must be remembered that one incorrect figure vitiates the correctness of an answer. I think it would be by no means a waste of time, if the Teachers of the competing Schools were to go over the paper with the candidates, and note very carefully the slightest error in any part of the working of each sum.

Another point to which attention needs to be drawn, is the direction that the working of each sum must be sent up as well as the answer. By some of the candidates this seems to have been construed somewhat too literally; while by others it has been neglected altogether, the consequence being to one of the candidates the loss of six places on the list. It is not, I presume, intended that, when a candidate, for instance, finds the number of pence in a Compound Addition sum to be 56, he is to write down the process at which he arrives at their being equal to four shillings and eight pence; but one who writes the result of the multiplication of *weeks, days, &c.*, by 379 in one line, evidently fails to comply with the direction referred to.

In History the answering was in a few cases far from satisfactory; but that which surprised me the most, was the extraordinary production of so many of the candidates in Dictation. Great allowances must of course be made for the strangeness of the voice of the Examiner, and possibly in some instances for a somewhat indistinct articulation on his part, but the papers before me shew that the candidates have contented themselves with merely putting down what appeared to them to be the sounds uttered, without any reference to the connection of the words with the rest of the clause, or indeed to their being correct English words at all. I cannot resist the conclusion, either that Dictation is not practised with nearly sufficient frequency, or that the Teachers are not careful enough in pointing out the mistakes, and seeing that they are then and there corrected. It will perhaps astonish some of the Teachers not a little to find how much ground I have for the above remarks, when they compare the passages that were dictated with those I have compiled from five or six of the papers sent in. I may remark, that in the two verses the whole of each line is taken from one paper, and what ideas were connected in the writer's mind with "Quare whils immeasurlets pray," I confess I am at a loss to imagine.

At a small distance from the house, my predecessor had made a seat, overshaded by an hedge of hawthorn and honeysuckle. Here, when the weather was fine and our labour soon finished, we usually sat together, to enjoy an extensive landscape, in the calm of the evening. Here too we drank tea, which was now become an occasional banquet; and as we had it but seldom, it diffused a new joy, the preparations for it being made with no small share of bustle and ceremony. On these occasions our two little ones always read for us, and they were regularly served after we had done. Sometimes, to give a variety to our amusements, my girls sung to the guitar; and while they thus formed a little concert, my wife and I would stroll down the sloping field, that was embellished with a variety of wild flowers, talk of our children with rapture, and enjoy the breeze that wafted both health and harmony.

Turn, gentle Hermit of the dale,
And guide my lonely way,
To where yon taper cheers the vale
With hospitable ray.

For here, forlorn and lost, I tread
With fainting steps and slow—
Where wilds, immeasurably spread,
Seem lengthening as I go.

At a small distance from the house, my pretisesser had made me to sit overshaded by an hedge forecorn and hunnycircle. Hear on the wheather was pin and our leighbour soon finish, we usually set together to enjoy and extensive landscript in the calm of the evening. Hear to we rang tea, which was now become and national banquet, and as we have at but sell them, it difuce in new joy, the preperations for it been made which no small share of purcil and ceromany. On these occasions our too little bonds allways bredfast. and they were regularly served after we had done. Sometime to give evenda to our amusements, my girl's son to dig it her, and find they thus fornd a little consert, my wife and I would scraw ground and sloop in field, that was embarish with a variety of wild flowers, talked off her children with repture, and enjoyed the breths that wetteth both hell and harmy.

Turn gently hermour of the day,
And gwide my longly wale,
To weare yound tabour chearce the rail
With horsipitabe rale.

For hear for long and rest I trade,
With fanting stepes and slow,
Quare whils immeasurlets pray
Seam lankening as I go.

I enclose a list of the candidates arranged in order of merit, and the marks assigned to each candidate in each subject; the unsuccessful candidates being indicated by their numbers only.

I have, &c.,
J. BROOKE H. BAILEY.

The Director of
Public Instruction.

PUBLIC INSTRUCTION.

Appendix A.—I.

A.

(Passed for a Certificate.)

1st Division.

None.

2nd Division.

(*In Order of Merit.*)

No.	*Name.*	*School.*	*Schoolmaster.*
105	Andris De Silva.....	.....Galle Central (Govt.) School.....	J. E. Anthonisz, Esq.
106	Alfred Brittain.....	Colombo Academy.....	.Rev. B. Boake, D.D.

B.

Names of those Students (not Candidates for a Certificate) who have succeeded in passing the Preliminary Part of the Examination.

40	Charles De Silva.	Galle Central (Govt.) School.....		J. E. Anthonisz, Esq.
1	C. Nagalingam.....	Jaffna Central School (Aided)..		Rev. J. O. Rhodes.
20	Vettivaloe Sevacore.....	Jaffna Boys' Seminary (Aided).....		Rev. G. Salaun.
33	Wm. Sameraweera.....	Galle Central (Govt.) School.....		J. E. Anthonisz, Esq.
27	Wm. S. Newman.....	Kandy Central (Govt.) School.....		J. Hill, Esq.
52	Arthur Henry Fretsz..	Kalutara English (Govt.) School,...		Mr. W. F. VanCuylenberg.
44	Albert Jansz	Galle Central (Govt.) School.....		J. E. Anthonisz, Esq.
34	Don Janis De Silva.....	do.	do.	do.
38	Johannes Blok.....	do.	do.	do.
35	Dionis De Silva.....	do.	do.	do.
26	John Bartholomeusz	Kandy Central (Govt.) School.....		J. Hill, Esq.
53	Henry James Stephen.....	Kalutara English (Govt.) School. ..		Mr. W. F. VanCuylenberg.
58	J. P. Landsberger.....	St. Benedict's Institution.....		Brother Cyprian.
48	Robert Bogaars.....	Galle Central (Govt.) School.....		J. E. Anthonisz, Esq.
47	George Wijesekera.....	do.	do.	do.
11	C. Muttyah.....	Jaffna Central School (Aided).....		Rev. J. O. Rhodes.
7	C. Chinnatamby.....	do.	do.	do.
3	Alexander Toussaint.....	do.	do.	do.
56	D. A. Kotalawela	Pánaduré English (Govt.) School...		Mr. A. Parys.
21	P. Allagaratevam	Jaffna Boys' Seminary (Aided).....		Rev. G. Salaun.
50	Dionisious Perera...	Mátara English (Govt.) School.....		Mr. R. H. Leembruggen.
28	G. A. Udugama Banda.....	Kandy Central (Govt.) School.....		J. Hill, Esq.
13	Samuel G. Danforth.....	Jaffna Central School (Aided).....		Rev. J. O. Rhodes.
9	S. Sevasedomparam.....	do.	do.	do.

Absent.

14 A. Vesuvalingam,
31 Richard Ferdinands,
32 N. W. Loku Banda,
46 Charles V. Gunawardana.

Those Candidates (34 in number) whose names do not appear in any of the above Lists, have failed.

J. Brooke H. Bailey,
Examiner.

Colombo,
17th January, 1870.

PART I.

No.	NAMES.	Grammar.	Geography.	History.	Arithmetic.	Dictation.	Reading.	Total.
	Full Marks.	125	75	125	75	25	25	450
40	Charles De Silva.....	77	45	83	36	20	18	279
1	C. Nagalingam	107	56	58	33	5	12	271
20	Vettevaloe Sevacore.....	93	33	76	28	15	12	257
33	Wm. Sameraweera.....	66	45	82	43	—	18	254
27	Wm. S. Newman.....	106	40	58	19	16	6	245
52	Arthur Henry Fretsz.....	55	44	77	35	16	12	239
44	Albert Jansz.....	75	39	73	42	6	—	235
34	Don Janis De Silva.....	69	43	63	40	—	12	227
38	Johannes Blok	41	47	87	36	—	12	223
35	Dionis De Silva	59	31	75	35	10	12	222

PART. I —*(continued.)*

No.	NAMES.	Grammar.	Geography	History.	Arithmetic.	Dictation.	Reading.	Total.
	Full Marks.	125	75	125	75	25	25	460
26	John Bartholomeusz.....	62	44	46	28	20	18	218
53	Henry James Stephen....	57	37	54	38	18	12	216
58	J. P. Landsberger.....	38	48	62	30	21	6	205
48	Robert Bogaars	47	31	65	27	15	18	203
47	George Wijesekera.....	44	33	60	34	13	6	190
11	C. Muttyah	61	42	50	27	—	—	180
3	C Chinnatamby.....	41	32	78	25	—	—	176
7	Alexander Toussaint.....	49	35	53	8	15	12	172
56	D A. Kotalawela	31	37	58	24	12	6	168
21	P. Allagaratevam..... ...	46	31	60	12	5	12	166
50	Dionisious Perera	29	36	44	34	3	18	164
28	G. A. Udugama Banda ...	50	41	37	15	—	12	155
13	Samuel G. Danforth.....	33	31	52	37	—	—	153
9	S. Sevasedemparam.....	27	41	45	31	—	6	150
25	....	36	29	59	12	—	—	136
16	.....	43	19	31	12	—	6	111
5	....	42	17	37	3	3	—	102
10	....	28	25	30	9	—	6	98

Nos. 14, 31, 32, and 46, were absent from the Examination.

Nos. 2, 4, 6, 8, 12, 15, 17, 18, 19, 22, 23, 24, 29, 30, 36, 37, 39, 41, 42, 43, 45, 49, 51, 54, 55, and 57, having failed to work the required proportion of sums in Simple and Compound Rules, were, according to the conditions attached to the Arithmetic paper, excluded from the remainder of the Examination.

PART II.

No	NAME.	Preliminary.	Arithmetic & Algebra.	Euclid.	Mechanics & Mensuration.	English and French.	Geography.	History.	Composition.	Sinhalese.	Total.
	Full Marks.	450	180	120	125	150	75	75	100	150	1425
105	Andris De Silva.....	290	48	45	—	79	45	45	60	100	712
106	Alfred Brittain.....	283	51	46	65	76	30	30	40	—	621

LOCAL EXAMINATIONS.—1869.

Time Table.—Part I.

Monday, *December* 6.	Tuesday, *December* 7.	Wednesday, *December* 8.	Thursday, *December* 9.	Friday, *December* 10.	Saturday, *December* 11.
10 to 1.	10 to 1.	10 to 10½.			
Arithmetic.	Grammar.	Dictation.			
2 to 4.		10½ to 1.			
Geography.		History.			

Time Table.—Part II.

	10 to 2.	10 to 2.	10 to 1.	10 to 2.	10 to 1
	Arithmetic and Algebra.	Euclid and Trigonometry.	Original Composition.	English Grammar, and French on the Study of Words.	Latin or Tamil.
			2 to 4.	3 to 5.	2 to 5
			Physical Geography,	English History.	Mensuration and Mechanics

N.B.—Students will be called upon to *read aloud* during the mornings of Monday and Tuesday, as the Superintendent shall find convenient.

PUBLIC INSTRUCTION.

Appendix A.—I.

DIRECTIONS TO CANDIDATES.

I. Look carefully at the Time Table, in which the hours are fixed for the subjects of Examination on each day, and always *be at your seat in the Examination Room five minutes before the time.*

II. When the questions are given to you, read them over carefully, and *mark those which you think you can answer best; and do them first.* If, after that, you still have time to spare, try some of the others.

III. Before you begin to write your answers, insert in the blank spaces at the top of your paper—

No.———

1. The *number* placed in the margin hereof, and *not* your name.
2. The *subject* in which the questions are set which you are about to answer.

IV. In writing your answers,

1. Write only on one side of the paper.
2. Put in the margin *the number of the question* before each answer.
3. Leave a blank space *after* each answer.
4. *Number your pages* as you go on.

V. If you want anything in the course of the Examination, do not leave your seat; but *call out your number*, and some one will attend to you.

VI. As soon as notice is given, (which will be five minutes before the end of the time,) finish your papers, see that they are numbered rightly and in their proper order, and take them, *folded once lengthwise from left to right*, to the Examiner.

CAUTIONS.

Candidates are strictly forbidden to communicate in any way with each other while under Examination.

Any Candidate detected in taking unfair advantages, such as getting others to help him in answering his questions, or bringing to the Examination Room any book or written paper for such a purpose, will be turned out with disgrace: and any Candidate detected in helping another will be subject to the same penalty.

No Candidate, who has left the Examination Room during the hours assigned to paper work, will be permitted to return to the paper which he quitted, without the consent of the Superintendent.

No Candidate is permitted to have in his possession, while he is in the Examination Room, any Book, Memorandum or Pocket-Book, Notes or Papers whatsoever, except the Questions set by the Examiners. In case he may have brought any such Book or Papers with him to the Examination Room, he must deliver them up to the Examiner before the Examination commences: he will otherwise render himself liable to the same penalty with those who may be detected in taking unfair advantages.

Stationery will be provided, but Candidates are recommended to bring their own pens.

ARITHMETIC.

The working of each sum must be sent up, as well as the answer. Be careful not to crowd the figures.

1. Add together the following numbers:—Fifteen thousand, seven hundred and ninety-six; four hundred and nine; two hundred and thirty-four thousand and fifty; four millions, three thousand and seventy-six; forty thousand and thirty-six; ten thousand, nine hundred and one.
2. Find the sum of three thousand nine hundred and sixty-six pounds, sixteen shillings, nine pence and three farthings; two pounds, eleven shillings, seven pence and three farthings; three thousand, seven hundred and ninety-five pounds, two pence and three farthings; thirty-seven pounds, seventeen shillings and three farthings; forty-eight pounds and three farthings; and fifty-nine thousand pounds, fourteen shillings, sixpence and three farthings.
3. Subtract five hundred and eighty-four thousand and seventy-six from fifteen millions, one hundred thousand and three; and prove the truth of the result.
4. Find the difference between thirteen miles, six furlongs, thirty-five poles, three yards, and twelve miles, thirty-eight poles, four yards.
5. Find the product of two hundred and six, and two millions, eight hundred and forty-six thousand and sixty-seven.
6. Multiply five weeks, six days, eighteen hours, fourteen minutes, by three hundred and seventy-nine.
7. Divide one hundred and fifty-two millions, one hundred and eighty-one thousand, two hundred and fifty-five, by three thousand, eight hundred and fifty-four.
8. Divide four hundred and ninety-two thousand, seven hundred and ten pounds, one shilling and eight pence, by six thousand, three hundred and fifty-two.
9. Find (by Practice) the cost of thirty hundred-weights, two quarters, fourteen pounds, at one pound, seventeen shillings, eight pence and one farthing per quarter.
10. Find the value of

$$2\tfrac{1}{2} \times \frac{1}{3\frac{1}{3} + \frac{1}{4\frac{1}{4}}} \text{ ; and of}$$

$$\left(\frac{1}{26} \text{ of } 3\tfrac{1}{4}\right) + \frac{\frac{3}{8}}{\frac{27}{64}} - \frac{\frac{1}{1\frac{1}{7}} - \frac{1\frac{1}{3}}{3}}{2 - \frac{5}{9}}.$$

11. A gentleman distributed £41 5s. among 12 men, 16 women, and 30 children; to every man he gave twice as much as to a woman, and to every woman three times as much as to a child: how much did each receive?
12. How much did a person spend in 63 days, who with an annual income of £818 is 90 guineas in debt at the end of a year?

NOTE.—No one will be allowed to pass in this paper, who fails to work at least six out of the first eight questions correctly

GEOGRAPHY.

ELEMENTARY.

1. Mention the principal Oceans of the globe, and state in which of them the following Islands are situated:—The Azores, Mauritius, Otaheite, Sandwich Islands, Spitzbergen, St. Helena, Vancouver's Island.
2. Where are the Rivers Mackenzie, Amazon, and Niger; the Lakes Erie, Guarda, and Tchad; the Capes Bon, Clear, and Race; the Gulfs of Siam, Bothnia, and Honduras; Cook's Straits and the Straits of Malacca; Mount Hecla and Cotopaxi?
3. Explain carefully the terms – Latitude, Zone, Archipelago, Peninsula, Oasis, Estuary, Watershed, Monsoon.
4. Give the position of the following Mountain Chains:—Andes, Alps, Apennines, Lebanon, Altaian, Atlas, Alleghany, Rocky, Balkan.
5. Describe in words the course of the Ganges, giving the names of its tributaries, and the points at which they flow into it. Mention also the towns situated on its banks.
6. Where are the following places? For what are any of them famous?

Geneva,	Pekin,	Montreal,
Melbourne,	Havannah,	Marseilles,
Singapore,	Archangel,	Jeddo.

WRITING FROM DICTATION.

The Examiner is requested

First, to read the following passage to the Students, in order that they may catch its general import.

Then, to dictate it very slowly, giving them ample time to write it down, and telling them where the *full stops* occur.

Lastly, to read it over a third time, that they may have an opportunity of correcting and punctuating what they have written.

He is also requested to warn the Candidates to be careful to put in all the stops

AT a small distance from the house, my predecessor had made a seat, overshaded by an hedge of hawthorn and honeysuckle. Here, when the weather was fine and our labour soon finished, we usually sat together, to enjoy an extensive landscape, in the calm of the evening. Here too we drank tea, which was now become an occasional banquet; and as we had it but seldom, it diffused a new joy, the preparations for it being made with no small share of bustle and ceremony. On these occasions our two little ones always read for us, and they were regularly served after we had done. Sometimes, to give a variety to our amusements, my girls sung to the guitar; and while they thus formed a little concert, my wife and I would stroll down the sloping field, that was embellished with a variety of wild flowers, talk of our children with rapture, and enjoy the breeze that wafted both health and harmony.

Turn, gentle Hermit of the dale,
And guide my lonely way,
To where yon taper cheers the vale
With hospitable ray.

For here, forlorn and lost, I tread
With fainting steps and slow—
Where wilds, immeasurably spread,
Seem lengthening as I go.

READING.

For the sake of uniformity, the following Rules must be strictly observed at all places where the Examination is held.

(*a*) The Students are to be called upon to read a portion of the following passage, one by one, during the hours allotted to the English Grammar or the Arithmetic Paper.

(*b*) Mistakes are not to be pointed out by the Examiner; but the Student may correct those, of whatever kind, which he detects for himself.

(*c*) As soon as the Student has read the prescribed passage, the Examiner should at *once* record his opinion of the performance, by attaching one of the five following letters to the Student's name.

E, if Excellent.
G, „ Good
F, „ Fair.
I, „ Imperfect.
B, „ Bad.

THE MERCHANT OF VENICE.

Shylock, the Jew, lived at Venice: he was an usurer, who had amassed an immense fortune by lending money at great interest to Christian merchants. Shylock, being a hard-hearted man, exacted the payment of the money he lent with such severity, that he was much disliked by all good men, and particularly by Antonio, a young merchant of Venice; and Shylock as much hated Antonio,

PUBLIC INSTRUCTION.

Appendix A.—1.

because he used to lend money to people in distress, and would never take any interest for the money he lent; therefore there was great enmity between this covetous Jew and the generous merchant Antonio. Whenever Antonio met Shylock on the Rialto (or Exchange), he used to reproach him with his usuries and hard dealings; which the Jew would bear with seeming patience, while he secretly meditated revenge.

Antonio was one of the kindest men that ever lived, the best conditioned, and had the most unwearied spirit in doing courtesies; indeed, he was one in whom the ancient Roman honour more appeared than in any that drew breath in Italy. He was greatly beloved by all his fellow-citizens; but the friend who was nearest and dearest to his heart was Bassanio, a noble Venetian, who, having but a small patrimony, had nearly exhausted his little fortune by living in too expensive a manner for his slender means, as young men of high rank with small fortunes are too apt to do. Whenever Bassanio wanted money, Antonio assisted him; and it seemed as if they had but one heart and one purse between them.

One day Bassanio came to Antonio, and told him that he wished to repair his fortune by a wealthy marriage with a lady whom he dearly loved, whose father, lately dead, had left her sole heiress to a large estate; and that in her father's lifetime he used to visit at her house, when he thought he had observed this lady had sometimes from her eyes sent speechless messages, that seemed to say he would be no unwelcome suitor; but not having money to furnish himself with an appearance befitting the lover of so rich an heiress, he besought Antonio to add to the many favours he had shewn him, by lending him three thousand ducats. Antonio had no money by him at that time to lend his friend; but expecting soon to have some ships come home laden with merchandise, he said he would go to Shylock, the rich money-lender, and borrow the money upon the credit of those ships.

Antonio and Bassanio went together to Shylock, and Antonio asked the Jew to lend him three thousand ducats upon any interest he should require, to be paid out of the merchandise contained in his ships at sea. On this, Shylock thought within himself: 'If I can once catch him on the hip, I will feed fat the ancient grudge I bear him; he hates our Jewish nation; he lends out money gratis; and among the merchants he rails at me and my well-earned bargains, which he calls interest. Cursed be my tribe if I forgive him!' Antonio, finding he was musing within himself and did not answer, and being impatient for the money, said: 'Shylock, do you hear? will you lend the money?' To this question the Jew replied: 'Signior Antonio, on the Rialto many a time and often you have railed at me about my moneys, and my usuries, and I have borne it with a patient shrug, for sufferance is the badge of all our tribe; and then you have called me unbeliever, cut-throat dog, and spit upon my Jewish garments and spurned at me with your foot, as if I was a cur. Well, then, it now appears you need my help; and you come to me and say, *Shylock, lend me moneys*. Has a dog money? Is it possible a cur should lend three thousand ducats? Shall I bend low and say, Fair sir, you spit upon me on Wednesday last, another time you called me dog, and for these courtesies I am to lend you moneys.' Antonio replied: 'I am as like to call you so again, to spit on you again, and spurn you too. If you will lend me this money, lend it not to me as to a friend, but rather lend it to me as to an enemy, that, if I break, you may with better face exact the penalty.' 'Why, look you,' said Shylock, 'how you storm! I would be friends with you, and have your love. I will forget the shames you have put upon me. I will supply your wants, and take no interest for my money.' This seemingly kind offer greatly surprised Antonio; and then Shylock, still pretending kindness, and that all he did was with a view to gain Antonio's love, again said he would lend him the three thousand ducats, and take no interest for his money; only Antonio should go with him to a lawyer, and there sign in merry sport a bond, that if he did not repay the money by a certain day, he would forfeit a pound of flesh, to be cut off from any part of his body that Shylock pleased.

'Content,' said Antonio; 'I will sign to this bond, and say there is much kindness in the Jew. Bassanio said Antonio should not sign such a bond for him; but still Antonio insisted that he would sign it, for that before the day of payment came, his ships would return laden with many times the value of the money.

Shylock, hearing this debate, exclaimed: 'Oh, father Abraham, what suspicious people these Christians are! Their own hard dealings teach them to suspect the thoughts of others. I pray you tell me this, Bassanio: if he should break this day, what should I gain by the exaction of the forfeiture? A pound of man's flesh, taken from a man, is not so estimable, nor profitable neither, as the flesh of mutton or of beef. I say, to buy his favour I offer this friendship: if he will take it, so — if not, adieu!'

At last, against the advice of Bassanio, who, notwithstanding all the Jew had said of his kind intentions, did not like his friend should run the hazard of this shocking penalty for his sake, Antonio signed the bond, thinking it really was, as the Jew said, merely in sport.

N.B.—Of the marks allotted to Reading, the letter E will carry the whole number.
G „ three fourths
F „ one-half.
I „ one-fourth.
B „ none.

A List of names, with their respective letters attached, to be sent in with the rest of the papers at the close of the Examination

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ENGLISH HISTORY.

Elementary.

1. How did Stephen become King? What relation was he to his predecessors of the House of Normandy? Who disputed his possession of the Throne? With what success?
2. When and by whom was Wales first brought under the English rule? Who was the first English Prince that bore the title of Prince of Wales?

3. In whose reign did the Wars of the Roses begin? Mention the names of the royal houses engaged in them. When and in whom were these houses united? Name in order the Sovereigns that belonged to each of them.
4. Mention the most important of Marlborough's victories. Over whom and in whose reign did he win them? When was the war in which they were won concluded?
5. When did the following persons live, and for what are they celebrated? The Maid of Orleans, Cranmer, Milton, Newton, Sir Robert Walpole, Strafford.
6. Where are the following places, and for what events are they celebrated? Naseby, Runnymede, The New Forest, Glencoe, Berkeley Castle, Preston Pans.

ARITHMETIC AND ALGEBRA.—Part II.

In order to obtain a Certificate it is *necessary* to satisfy the Examiner in the first portion of this paper.

1. Define a Decimal, and shew how its value is affected by affixing and prefixing cyphers.

   Reduce ·0625 and 3·14159 to fractions; and express the difference between $20\frac{5}{14}$ and $17\frac{1}{12}$ as a decimal.

2. Divide 684·1197 by 1200·21, and also by ·0120021; and explain fully how the position of the decimal point is determined in each of the quotients.
3. If 7 men, working 16 days, can mow a field of corn 1320 yards long and 880 wide; what will be the length of the side of a field 1320 yards broad, which 4 men can mow in 42 days?
4. Explain the difference between Discount and Interest.

   A bill of £1000, drawn on February 16th of the current year, at 7 months' date, was discounted on the 8th of July at 5 per cent.; what did the banker gain by the transaction?
5. If by selling a horse for £40 I lose 20 per cent., what ought I to have sold him for to gain 10 per cent.?
6. What is the signification of a vinculum or bracket?

   If $a = 2$, $b = 3$, $x = 5$, $y = 6$, find the numerical values of

   (1) $a + x - \left\{ b + y - \left[a - x - (b - 2y) \right] \right\}$.

   (2) $\sqrt[3]{(a+b)^2 x} + \sqrt[3]{(a+x)^2 (2y - x)} + \sqrt[3]{(cy - b)^2 b}$.

7. Find the Greatest Common Measure of

   (1.) $x^3 + 2x^2 + 2x + 1$ and $x^3 - 2x - 1$;

   also of

   (2.) $x^6 + 4x^5 - 3x^4 - 16x^3 + 11x^2 + 12x - 9$,

   and $6x^5 + 20x^4 - 12x^3 - 48x^2 + 22x + 12$.

8. Solve the following equations:

   (1.) $a(x + a) - b(x - b) = 3ax + (a - b)^2$.

   (2.) $\dfrac{\frac{7x}{3} - 2}{4} - \dfrac{5x - \frac{1}{2}}{3} = \dfrac{\frac{x}{4} - 2}{5} - 3\frac{1}{3}$.

   (3.) $\dfrac{x-1}{x-2} - \dfrac{x-2}{x-3} = \dfrac{x-5}{x-6} - \dfrac{x-6}{x-7}$.

   (4.) $\left.\begin{aligned} \frac{7+x}{5} - \frac{2x-y}{4} &= 3y - 5, \\ \frac{5y-7}{2} + \frac{4x-3}{6} &= 18 - 5x. \end{aligned}\right\}$

9. The present ages of two men differ by 10 years; 15 years ago the elder was just twice as old as the younger. Find the ages of the men.
10. A person has two horses, and a saddle worth £10; if the saddle be put on the first horse, his value becomes double that of the second; but if the saddle be put on the second horse, his value is less than that of the first horse by £13. Find the value of each horse.

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11. Solve the following equations;

   (1.) $\dfrac{\sqrt{a} + \sqrt{a-x}}{\sqrt{a} - \sqrt{a-x}} = \dfrac{1}{a}$.

   (2.) $\dfrac{x+7}{x+11} - \dfrac{x+5}{x+12} = \dfrac{47}{306}$.

   (3.) $\sqrt{2x+7} + \sqrt{3x-18} = \sqrt{7x+1}$.

PUBLIC INSTRUCTION.

Appendix A.—I.

12. *A* and *B* distribute £1200 each among a certain number of persons: *A* relieves 40 persons more than *B*, and *B* gives £5 a piece to each person more than *A*: find thee number of persons relieved by *A* and *B* respectively.

13. Find the square root of $x^4 - 2x^3 + \frac{3}{2}x^2 - \frac{1}{2}x + \frac{1}{16}$;

and the cube root of $a^6 - 6a^5 + 15a^4 - 20a^3 + 15a^2 - 6a + 1$.

14. Prove the formula for finding the sum of a series of quantities in Arithmetical Progression; and find the sum of the series 3 + 9 + 15 + &c. to 11 terms.

15. Find the sum of the series $1 + \frac{2}{3} + \frac{4}{9}$ + &c. to 10 terms, and insert 4 Geometrical Means between $\frac{1}{9}$ and 27.

16. A debt can be discharged in a year by paying one shilling the first week, 3 the second, 5 the third, &c. Required the amount of the debt, and of the last payment.

EUCLID.

In order to obtain a Certificate it is *necessary* to satisfy the Examiner in Section I.; Section II. is optional.

Section I.

1. If two angles of a triangle be equal to one another, the sides also which subtend, or are opposite to, the equal angles, shall be equal to one another.
2. The three interior angles of every triangle are equal to two right angles.
3. Shew that parallelograms on the same base and between the same parallels are equal.
4. Describe a square upon a given straight line.
5. If there be two straight lines, one of which is divided into any number of parts; the rectangle contained by the two straight lines is equal to the rectangles contained by the undivided line, and the several parts of the divided line.
6. Find the side of a square which shall be equal to a given rectangle.

Section II.

1. Similar segments of circles on equal straight lines are equal to one another.
2. The opposite angles of any quadrilateral figure, inscribed in a circle, are together equal to two right angles.
3. In a given triangle inscribe a circle.
4. Describe an isosceles triangle, having each of the angles at the base double of the third angle.
5. Equal parallelograms, which have one angle of the one equal to one angle of the other, have their sides about the equal angles reciprocally proportional.
6. Similar triangles are to one another in the duplicate ratio of their homologous sides.

PLANE TRIGONOMETRY.

1. Define a logarithm; and state the properties on which the utility of logarithms chiefly depends.
2. The Tangent of an angle is $\frac{4}{3}$, find the values of the other Trigonometrical Ratios of the angle.
3. Prove the following formulæ:
   (1.) cot A. tan A = 1.
   (2.) sin (A − B) = sin A cos B − cos A sin B.
   (3.) $\cot 2A = \frac{\cot^2 A - 1}{2 \cot A}$.
4. When two sides and the included angle of a triangle are given, shew how the triangle may be completely solved.
5. A person standing on the bank of a river observes the elevation of the top of a tree on the opposite bank to be 75°, and when he retires 20 feet from the river's edge he finds the elevation to be 60°; determine the height of the tree, and the breadth of the river.
6. In a triangle (A, B, C, *a*, *b*, *c*,), given $b = 5{\cdot}75$, $c = 4{\cdot}5$, A = 48° 20′: find B, C, and *a*.

log	1·25 = ·0969100,	L tan 65° 50′	= 10·3480258,
log	4·3485 = ·6383382,	L tan 15° 12′ 16″	= 9·4342119,
log	4·5 = ·6532125,	L sin 48° 20′	= 9·8733352,
log	10·25 = 1·0107239,	L sin 50° 37′ 44″	= 9·8882095.

Note.—It should be remembered that L sin, &c. = log sin + 10, &c.

ORIGINAL COMPOSITION.

Each Exercise should fill not less than four and not more than eight pages.

One of the following subjects to be selected by the Candidate:—

1. Music, *or* Architecture, *or* Painting.
2. An account of any book you have lately been reading.
3. The advantages which a nation derives from foreign commerce.
4. A brief sketch of the life and character of Julius Cæsar, *or* Queen Elizabeth, *or* Sir Isaac Newton, *or* Lord Clive.

GEOGRAPHY.—PART II.

PHYSICAL, POLITICAL, AND COMMERCIAL.

Six questions only to be answered, which the Student may select for himself, but he is recommended to try something in *each* Section.

SECTION I.

1. Explain what is meant by Political Geography; Commercial Geography; Physical Geography.
2. Describe the chief mountain ranges in Europe, and mention the principal rivers that rise in each.
3. Give some account of the discovery of America, *or* of the rise of the Australian Colonies, *or* of the Indian Empire.

SECTION II.

1. What is meant by Latitude and Longitude? Shew how to find the Latitude and Longitude of any place on the globe.
2. Give approximately the Latitude and Longitude of the following places: Liverpool, New York, Gibraltar, Warsaw, Edinburgh, Calcutta, Melbourne, St. Helena.
3. Explain how the difference in time at two places in different degrees of longitude is calculated. When it is 2 P.M. at Colombo, what time is it in London?

SECTION III.

1. Where are Aden, Gibraltar, Sierra Leone, Singapore, Hongkong? How have they come into British occupation, and of what special importance to Great Britain is the occupation of each?
2. What countries of Europe are most famous for the production of corn and wine? From what sea-ports are the greatest supplies of those commodities exported?
3. Describe carefully the position of the following towns, mentioning the river (if any) on which each of them is situated, and the circumstances of interest connected with any of them: Frankfort, Milan, Leipsic, Cincinnati, Quebec, Benares, Antioch, Delhi, Canton.

SECTION IV.

1. Mention some of the most remarkable waterfalls in the world; and give a general account of any one.
2. Trace the course of each of the four principal rivers of Ceylon from its source to its mouth, mentioning the towns situated on each.
3. What are the divisions of Australia? Name the principal towns of each division.

ENGLISH.

1. Analyse the following passage, and parse fully the words printed in *italics*:

> *Soldier*, rest! thy warfare *o'er*,
> *Sleep* the sleep *that* knows not breaking;
> Dream of *battle* fields no more,
> Days of danger, nights of *waking*.

2. Explain the origin and meaning of the prefixes: circum-, sub-, ac-, de-, con-, be-, sym-, and of the affixes, -gram, -graph, -graphy, -logy. Illustrate by instances of words in which they occur.
3. Copy the following passage clearly and legibly; correct the mistakes in grammar and spelling, and punctuate it correctly:

A great deal of discomfort arises from oversensitiveness about what people may say of you or your actions this requires to be blunted consider wether anything that you can do shall have much connection with what they will say and besides it may be doubted wether they shall say anything at all about you many an unhappy person seem to think that they are always in an unfytheater with the assembled world as spectators whereas all the while they are playing to empty benches they fancy too that they form the particular theme of every passer-bye.

4. Shew the difference of meaning between the following words:

silly *and* stupid,	sorrow *and* melancholy,
different *and* distinct,	to contemn *and* to despise,
patience *and* fortitude,	fear *and* terror,

5. Give the Saxon words in common use, which most nearly answer to the following: *extend, expand, penetrate, pervade, denote, depart, spiritual, multitude, intrusion, invasion, incursion, elevation, altitude, division*
6. Point out and correct any faults in the following sentences:

> O thou my voice inspire,
> Who touched Isaiah's hallowed lips with fire!

> No pitying heart, no eye afford
> A tear to grace his obsequies.

He was a man whose vices were very great and had the art to conceal them from the eyes of the public.

PUBLIC INSTRUCTION.

Appendix A.—I.

It is likely that neither of these are the meaning of the text.

There has been at least three times as much rain fall this week than has been the case in the previous week.

Many an emigrant have regretted the domestic pleasures from which they have been deprived, and which were impossible to be carried to their new country.

7. What is meant by a Mood? How many Moods are used in English grammar? Write very short sentences, illustrating the use of each Mood.

TRENCH ON THE STUDY OF WORDS.

1. What objection is there to regarding language simply as an invention?
2. From what sources is the English language chiefly derived? Mention any words derived (1) from ancient Greek or Roman philosophers, (2) from the schoolmen. Whence do we derive the words "Earl" and "Countess?"
3. Words sometimes preserve the record of exploded errors. Shew in what way the following words do this: *leopard, sardonic, humour, saturnine, jovial, mercurial, amethyst.*
4. Allusion to what ancient customs is bound up in the words, *thraldom, calculation, expense, stipulation?*
5. What information about the following *things* may be obtained from the *names* they bear? *bayonet calico, guinea, cordwain, cherry, peach, currants, dimity, damask, sherry, ermine.*
6. Define synonyms. How do synonyms find place in a language? What advantages in respect of style may we hope to gain by the study of them.

ENGLISH HISTORY.

From the Accession of James I. to the Death of Anne.

Candidates are not to answer more than eight questions in this paper.
It is recommended that two questions should be selected from each Section.
The date of each event mentioned should be inserted, wherever it can be done

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SECTION—I.

1. By what right did James I. succeed to the throne of England?
2. Give an account of the Hampton Court Conference.
3. What was the Petition of Right? In what manner did the king treat it?
4. Mention the principal battles of the Civil War, with their results, and the names of the Generals engaged in each.

SECTION—II.

1. In what wars were the English engaged during the time of the Commonwealth?
2. What were the circumstances which immediately led to the Restoration?
3. Describe the abdication of James II.
4. Give an account of the Convention Parliament.

SECTION—III.

1. Describe the attempts which were made to restore James II. to the throne of England.
2. What was the Act of Settlement?
3. Give a narrative of *one* of the following events;
   (*a*) The Battle of Blenheim.
   (*b*) The Trial of the Bishops.
   (*c*) The Fire of London.
4. Give some account of the rise of the names, ***Roundhead, Independent, Fifth Monarchy Men, Whig, Tory.***

SECTION IV.

1. Who were the chief writers of English prose during the reign of James I. and Charles I.? Name the principal works of each.
2. Sketch the career of Edward Hyde, Lord Clarendon, *or* Thomas Wentworth, Lord Strafford.
3. Give some account of the Peace of Ryswick, its date, the parties concerned in it, and its most important conditions.
4. Mention the principal discoveries of the 17th Century.

MECHANICS.

1. Explain what is meant by the *Parallelogram of Forces*, and shew how it may be verified experimentally.
2. Two forces of 15 lbs. and 8 lbs., respectively, act at right angles to each other; find the resultant.
3. Two equal forces act at an angle of 120°; find the direction and magnitude of the resultant.
4. Describe the 3 classes of levers, and give a familiar example of each.

5. The pressure on the fulcrum is 12 lbs., and the distance of the fulcrum from the middle point of the lever is one-twelfth of the whole length of the lever; find the forces which, acting on opposite sides of the fulcrum, will produce equilibrium.
6. Two men carry a uniform plank, 6 feet in length, and weighing 2 cwt., and at 2 feet from one end a weight of 1 cwt. is placed; if one man have this end resting on his shoulder, find where the other man must support the beam, in order that they may share the whole weight equally.
7. Find the number of strings at the lower block in the *Second System* of pullies, when P=12 stone, and W=18 cwt.
8. What is meant by the Centre of Gravity?
9. Find the centre of gravity of a parallelogram.
10. Find the centre of gravity of 4 weights, 1 lb., 2 lbs., 3 lbs., 4 lbs., placed at the angular points of a square.

MENSURATION.

1. A court yard, 15 yards by 12 yards, is to be paved with pebbles at 3*s.* per square yard, except a foot-way, 4 feet broad, which runs down the middle of the length of the court, and this is to be laid with Purbeck stone at 3*s.* 6*d.* per square yard. What will the whole come to?
2. A square garden, which is 200 yards round, has a wall, 2 bricks thick and 8 feet high. How many rods of standard brickwork are there in it?
3. What must be the size of a box to hold a work in 50 volumes, each of which is 9 inches long, 6 inches wide, and 2 inches thick?

APPENDIX A.—II.

TURNOUR PRIZE, 1870.

To

The Director of Public Instruction. Colombo, 2nd February, 1870.

Sir,

I have the honor to report, that for the late Examination for the Turnour Prize, only one candidate, Mr. S. Allegakoon, presented himself.

From the annexed Statement of the marks which he obtained it will be seen that he has, on the whole, acquitted himself very fairly. The papers in which he was least successful were those in Virgil and English History. In the former of these the translations were indifferently done, and in both there were mistakes which appeared to be the result of inaccuracy rather than ignorance.

With regard to the other papers, I am bound to say that, although they displayed but little originality of ideas upon any matters in the slightest way unconnected with the special subjects of examination, yet they evinced a considerable amount of careful industry which was in many instances highly creditable to Mr. Allegakoon; and I therefore beg to recommend him for the Turnour Prize.

I have, &c.,

Bertram Fulke Hartshorne.

Schedule of Marks obtained in the Examination for the Turnour Prize, 1870.

Name.	Milton.	Scott.	History.	Virgil.	Cicero.	Abercrombie.	Total.
Maximum.	200	200	200	200	200	200	1,200
S. Allegakoon	105	114	88	87	101	124	619

B. F. Hartshorne,
Examiner.

TURNOUR PRIZE, 1870.

MILTON.

1. **Paraphrase** in English Prose:—

> His spear, to equal which the tallest pine
> Hewn on Norwegian hills, to be the mast
> Of some great *ammiral*, *were* but a wand
> He walk'd with to support uneasy steps
> Over the burning marle, not like those steps
> On Heaven's *azure*, and the torrid clime
> Smote on him sore besides, vaulted with fire:
> *Nathless*, he so indur'd, till on the beach
> Of that inflamed sea he stood, and call'd
> His legions, Angel forms, who *lay* intranc'd
> Thick as autumnal leaves that strow the brooks
> In *Vallombrosa*, where th' Etrurian shades
> High over-arch'd imbow'r; or scattered sedge
> Afloat, when with fierce waves Orion arm'd
> Hath vex'd the Red-Sea coast, *whose* waves o'erthrew
> *Busiris and his Memphian chivalry.*

Parse and explain the italicized words.

2. **Paraphrase** in English Prose:—

> There is a place
> (If ancient and prophetic fame in Heaven
> Err not) another world, the happy seat
> Of some new race call'd man, about this time
> To be created like to us, though less
> In pow'r and excellence, but favor'd more
> Of him who rules above; so was his will
> Pronounc'd among the Gods, and by an oath,
> That shook Heaven's whole circumference, confirm'd
> Thither let us bend all our thoughts, to learn
> What creatures there *inhabit*, of what *mold*
> Or substance, *how indued*, and what their power,
> And where their weakness, how attempted best,
> By force or subtlety.

Explain the italicized words, and give the derivation of the words: prophetic, Heaven, indued, subtlety.

3. **Explain** the allusions in the following passages:—

a. "Him the Ammonite
Worshipt in Rabba and her wat'ry plain."

b. "Anon they move
In perfect phalanx to the Dorian mood
Of flutes and soft recorder."

c. "Whom Biserta sent from Afric shore,
When Charlemain with all his peerage fell
By Fontarabbia."

d. "Part curb their fiery steeds, or shun the goal
With rapid wheels."

e. "As when Alcides, from Oechalia crown'd
With conquest, felt th' envenom'd robe and tore
Through pain up by the roots Thessalian pines,
And Lichas from the top of Æta threw
Into th' Euboic Sea."

f. "As when a gryphon through the wilderness
With winged course, o'er hill or moory dale,
Pursues the Arimaspian, who by stealth
Had from his wakeful custody purloin'd
The guarded gold."

4. **Give** an outline of the argument of the second book of Paradise Lost.

5. **Quote** any passages from Paradise Lost which are imitated from Homer or Virgil.

6. **Explain** the meaning and give instances of: a simile, a truism, a metaphor, a constant epithet, an abstract noun, a pure categorical proposition.

7. **Multa** renascentur quæ Jam cecidere, cadentque
Quæ nunc sunt in honore vocabula, si volet usus
Quem penes arbitrium est et Jus et norma loquendi.

Explain and verify this statement by a comparison between the English of Milton and **that in ordinary use** in the present day.

LAY OF THE LAST MINSTREL.

1. Paraphrase in English prose :—

The ready page, with hurried hand
Awaked the need-fire's slumbering brand,
And ruddy blushed the heaven :
For a sheet of flame, from the turret high,
Waved like a blood flag on the sky,
All flaring and uneven ;
And soon a score of fires, I ween,
From height, and hill, and cliff, were seen ;
Each with warlike tidings fraught ;
Each from each the signal caught ;
Each after each they glanced to sight,
As stars arise upon the night.
They gleam'd on many a dusky tarn,
Haunted by the lonely earn ;
On many a cairn's grey pyramid,
Where urns of mighty chiefs lie hid ;
Till high Dunedin the blazes saw,
From Soltra, and Dumpender Law ;
And Lothian heard the Regent's order,
That all should bowne them for the Border.

2. Paraphrase in English prose :—

Behind the English bill and bow,
The mercenaries, firm and slow,
Moved on to fight, in dark array,
By Conrad led of Wolfenstein,
Who brought the band from distant Rhine,
And sold their blood for foreign pay.
The camp their home, their law the sword,
They knew no country, own'd no lord:
They were not armed like England's sons,
But bore the levin-darting guns;
Buff coats, all frounced and 'broider'd o'er,
And morsing horns and scarfs they wore;
Each better knee was bared, to aid
The warriors in the escalade;
All, as they marched, in rugged tongue,
Songs of Teutonic feuds they sung.

3. Paraphrase in English prose :—

Dark was the vaulted room of gramarye
To which the wizard led the gallant knight,
Save that before a mirror, huge and high,
A hallow'd taper shed a glimmering light
On mystic implements of magic might;
On cross, and character, and talisman,
And almagest, and altar, nothing bright:
For fitful was the lustre, pale and wan,
As watchlight by the bed of some departing man.

But soon, within that mirror huge and high,
Was seen a self-emitted light to gleam;
And forms upon its breast the Earl 'gan spy,
Cloudy and indistinct, as feverish dream;
Till, slow arranging, and defined, they seem
To form a lordly and a lofty room,
Part lighted by a lamp, with silver beam,
Placed by a Couch of Agra's silken loom,
And part by moonshine pale, and part was hid in gloom.

4. Explain the allusions in the following passages :—

a. My neck-verse at Hairibee.
b. St. David's ruin'd pile.
c. His barred aventayle.
d. Of Gilbert the Galliard a heriot he sought.
e. Our slogan is their lyke-wake dirge.
f. The land Debateable.
g. Salamanca's cave.
h. For he was speechless, ghastly, wan,
Like him of whom the story ran,
Who spoke the spectre-hound in man.

5. It has been said that Sir W. Scott managed the versification of the Lay of the Last Minstrel very judiciously by throwing in a great mixture of the familiar, instead of aiming at the grave and stately cadence of the epic.
Analyse the grounds of this criticism.

6. What were the chief characteristics of the style of the old ballads and metrical romances, and to what extent are they embodied in the Lay of the Last Minstrel?

7. Quote any passages from the Lay of the Last Minstrel which serve to illustrate the distinctive features of: *(a.)* Border life—*(b.)* of Scotch nationality.

PUBLIC INSTRUCTION.

Appendix A.—II.

VIRGIL.

1. Translate :

Este duces O si qua via est cursumque per auras
Dirigite in lucos, ubi pinguem dives opacat
Ramus humum : tuque O ! dubiis ne defiðe rebus,
Diva parens. Sic effatus, vestigia pressit,
Observans quæ signa ferant, quo tendere pergant.
Pascentes illæ tantum prodire volando,
Quantum acie possent oculi servare sequentum.
Inde ubi venere ad fauces graveolentis averni,
Tollunt se celeres ; liquidumque per aera lapsæ,
Sedibus optatis geminæ super arbore sidunt,
Discolor unde auri per ramos aura refulsit.
Quale solet silvis brumali frigore viscum
Fronde virere novâ, quod non sua seminat arbos,
Et croceo fetu teretes circumdare truncos ;
Talis erat species auri frondentis opacâ
Ilice ; sic leni crepitabat bractea vento.
Corripit Æneas extemplo, avidusque refringit
Cunctantem, et vatis portat sub tecta Sibyllæ.

2. Translate :

At Danaum proceres Agamemnoniæque phalanges
Ut videre virum fulgentiaque arma per umbras
Ingenti trepidare metu : pars vertere terga,
Ceu quondam petiere rates : pars tollere vocem
Exiguam ; inceptus clamor frustratur hiantes.
Atque hic Priamiden, laniatum corpore toto,
Deiphobum vidit, lacerum crudeliter ora,
Ora, manusque ambas, populataque tempora raptis
Auribus, et truncas inhonesto vulnere nares.
Vix adeo agnovit pavitantem, ac dira tegentem
Supplicia ; et notis compellat vocibus ultro.

3. Translate :

Principio cœlum, ac terras, camposque liquentes
Lucentemque globum lunæ, Titaniaque astra,
Spiritus intus alit ; totamque, infusa per artus,
Mens agitat molem, et magno se corpore miscet.
Inde hominum pecudumque genus, vitæque volantum,
Et quæ marmoreo fert monstra sub æquore pontus.
Igneus est ollis vigor, et cœlestis origo,
Seminibus ; quantum non noxia corpora tardant,
Terrenique hebetant artus moribundaque membra.
Hinc metuunt, cupiuntque ; dolent gaudentque neque auras
Despiciunt, clausæ tenebris, et carcere cæco.

4. Translate and explain, and point out any peculiarities of expression in, the following passages :—

a. Et ni docta comes tenues sine corpore vitas
Admoneat volitare cava sub imagine formæ
Irruat et ferro frustra diverberet umbras.

b. Tartarus ipse
Bis patet in præceps tantum, tenditque sub umbras,
Quantus ad ætherium cœli suspectus Olympum.

c. Nec non Threicius longâ cum veste sacerdos
Obloquitur numeris septem discrimina vocum;
Jamque fidem digitis, jam pectine pulsat eburno.

d. Illius ergo
Venimus.

e. Quisque suos patimur manes.

f. Quantum instar in ipso.

5. Describe a Roman funeral, and illustrate your account by quotations from the VI.th Æneid.

6. To what extent does the Latin language suffer
   a. From the want of the definite article.
   b. From the want of a dual number.
   c. From the want of an aorist tense.
   d. From the want of a past participle in the active voice.

Frame short Latin sentences illustrative of the way in which these defects are severally supplied.

CICERO.

1. Translate :

Quartum genus est sane varium et mixtum et turbulentum ; qui jampridem premuntur, qui nunquam emergent ; qui partim inertiâ, partim male gerendo negotio, partim etiam sumptibus in vetere ære alieno vacillant; qui vadimoniis, judiciis, proscriptionibus bonorum defatigati, perculti

et ex urbe et ex agris se in illa castra conferre dicuntur. Hosce ego non tam milites acres, quam infitiatores lentos esse arbitror. Qui homines primum si stare non possunt, corruant: sed ita, ut non modo civitas, sed ne vicini quidem proximi sentiant. Nam illud non intelligo, quamobrem, si vivere honesti non possunt, perire turpiter velint, aut cur minore dolore perituros se cum multis, quam si soli pereant, arbitrentur. Quintum genus est parricidarum, sicariorum, denique omnium facinerosorum; quos ego a Catilina non revoco; nam neque divelli ab eo possunt, et pereant sane in latrocinio, quoniam sunt ita multi, ut eos capere carcer non possit.

2. Translate:

Alter intelligit mortem a diis immortalibus non esse suplicii causâ constitutam, sed aut necessitatem naturæ aut laborum ac miseriarum quietem esse. Itaque eam sapientes nunquam inviti, fortes etiam sæpe libenter oppetiverunt. Vincula vero, et ea sempiterna, certe ad singularem pœnam nefarii sceleris inventa sunt. Municipiis dispertiri jubet. Habere videtur ista res iniquitatem, si imperare velis; difficultatem si rogare. Decernatur tamen, si placet. Ego enim suscipiam et, ut spero, reperiam, qui id, quod salutis omnium causâ statueritis, non putent esse suæ dignitatis recusare. Adjungit gravem pœnam municipibus, si quis eorum vincula ruperit; horribiles custodias circumdat et digna scelere hominum perditorum sancit, ne quis eorum pœnam, quos condemnat, aut per senatum aut per populum levare possit; eripit etiam spem, quæ sola hominem in miseriis consolari solet. Bona præterea publicari jubet: vitam solam relinquit nefariis hominibus; quam si eripuisset, multos uno dolore animi atque corporis et omnes scelerum pœnas ademisset.

3. Translate and explain the allusions in the following passages:—

a. Meo beneficio tabulæ novæ proferentur verum auctionariæ.
b. Manicatis et talaribus tunicis.
c. Superavit postea Cinna cum Mario.
d. C. Servilius Ahala Sp. Mœlium novis rebus studentem manu suâ occidit.

4. Explain the meaning of Libertinus, supplicatio, nudiustertius, tribuni ærarii, testamentorum subjector, circumscriptor.

5. Turn the following passage into the Oratio recta:—

"Introducti autem Galli jusjurandum sibi et literas a P. Lentulo, Cethego, Statilio ad suam gentem datas esse dixerunt atque ita sibi ab his et a L. Cassio esse præscriptum, ut equitatum in Italiam quam primum mitterent; pedestres sibi copias non defuturas."

6. Explain and give instances of the use of *ut* and *qui* with the subjunctive; what is the difference of meaning between

Nonne Aristides pulsus est quia nimium justus erat; and
Nonne Aristides pulsus est quia nimium justus esset?

7. Translate into Latin:

If he has anything he gives it.
If he have anything he will give it.
If he were to have anything he would give it.
If he had had anything he would have given it.

ABERCROMBIE ON THE MORAL FEELINGS.

1. Explain the nature and office of the moral principle.
2. What conditions are essential to veracity?
How is veracity affected by scepticism?
3. Give some account of ambition and of benevolence. To what moral vices are they respectively capable of giving rise?
4. Define Justice. By what distinct criteria should a man estimate the justice of his conduct towards others, and of his conduct in respect of his own interests?
5. Explain the following expressions: fallacy, a hypothetical case, sophism, metaphysical, á priori truth.
6. In what way are moral habits regulated by the exercise of the faculty of reflection?
7. To what extent do habits influence the will?
8. Explain the relation between reason and conscience.
9. Give some account of the utilitarian theory of morals. To what objections is it open?
10. Mention the chief authors of works upon moral philosophy who are referred to by Abercrombie, and state briefly the main outlines of the systems which they severally advocated.

ENGLISH HISTORY.

1. By what title did James 1st become King of England?
2. Who were Sir Thomas Overbury, Sir Walter Raleigh, Lord Verulam, and the Pilgrim Fathers?
3. What important events in connexion with the history of the Established Church took place in the reign of James 1st?
4. Explain the nature and effect of the Petition of Rights.
5. Give an account of the origin, history, and jurisdiction of the Courts of Star Chamber and High Commission.
6. Mention the duration and the chief measures of each of the Parliaments summoned by Charles 1st.
7. Give a brief account of the Cabal, John Hampden, the Earl of Stafford, the grand remonstrance, Pride's Purge, and Barebone's Parliament.
8. Mention the chief leaders of the Parliamentary army during the Civil War. Upon what occasions were the forces of the King most successful?
9. Give an account of the events which occurred in Ireland during the Protectorate.
10. Sketch the character of Oliver Cromwell.

PUBLIC INSTRUCTION.

Appendix A.- III.

APPENDIX A.—III.

Mathematical Prize, 1871.

An Examination for the above prize will be held on the 3rd July, 1871, and following days, open to *bona-fide* pupils of any School in Ceylon, who shall send in their names to this Office on or before the 30th June, 1871, together with certificates of character, and of attendance for six months previous to date, from the Master of the School to which they belong, and proof of their age not exceeding 20 years. The Examination will embrace the following subjects:—

Arithmetic and Algebra.

Geometry:—Euclid, Books I. to VI.; XI., XII.

Plane Trigonometry.

Mechanics:—Composition and Resolution of Forces; the Mechanical powers; the Centre of Gravity; the General Laws of Motion; the Motion of falling bodies in free space and down inclined planes.

Candidates will have an opportunity of shewing their knowledge of Land Surveying, and of the use of Surveying Instruments.

The Director, in specifying the above subjects, whereby the limit of the Examination is indicated, desires it to be understood, that it is his wish to encourage, not so much a widely extended, as a thorough and accurate, knowledge of Mathematical subjects; and therefore a special excellence will have more weight than a general mediocrity.

When persons, not resident in Colombo or its neighbourhood, offer themselves as candidates for the above prize, arrangements will be made, when practicable, for holding the Examination at a Central Town, near the residences of such candidates, simultaneously with that in Colombo.

Office of Public Instruction,
Colombo, 11th November, 1870.

W. J. Sendall,
Director.

Appendix A.—IV.

APPENDIX A.- IV.

NOTICE.

Local Examinations.—General Regulations.

Examinations will be held in Colombo, Kandy, Galle, and Jaffna, and simultaneously in other places, if it be requested and found expedient.

After the Examination, the names of the Students who pass with credit will be placed alphabetically in three Honor Classes, and the names of those who pass to the satisfaction of the Examiners, yet not so as to deserve honours, will be placed alphabetically in a separate Class. Marks of distinction will be attached to the name of any Candidate who may specially distinguish himself in particular parts of the Examination. After the name of every Student will be added his age, his place of residence, the School (if any) from which he comes to attend the Examination, and the name of his Schoolmaster.

In determining the Classes, account will be taken of every part of the Examination; but no credit will be given for knowledge of any section, unless the Student shews enough to satisfy the Examiners in that section. Regard will be paid to the handwriting and spelling throughout the Examination.

The Students who pass with credit, or satisfy the Examiners, will also be entitled to receive Certificates to that effect. Every Certificate will specify the subjects in which the Student has passed with credit, or satisfied the Examiners, and the Class in which his name is placed.

Every one admitted to Examination will be required to pay a fee of Five shillings.

The Students must be under 17 years of age on the day when the Examination begins.

The names of Students desirous of being examined must be sent to the Secretary, School Commission Office, Colombo, on or before November 1st, 1862, together with

1. Certificates of age.
2. Certificates of good moral character from their respective Schoolmasters, or, in the case of Students privately educated, from a Clergyman or Justice of the Peace.
3. Statements of the subjects in which they will offer themselves for Examination.
4. Their fees.

The fees for all Students must be paid on or before November 1st, 1862. Fees from persons resident at out-stations will be remitted by Government Drafts, on application at the Local Kachchéries.

The Central School Commission is entrusted with the management of the Examinations, subject to the above Regulations.

In filling up Junior appointments in the Public Service, special regard will be had to the claims of those who shall have passed the Examination with credit.

By His Excellency's Command,

Colonial Secretary's Office,
Colombo, 26th November, 1861.

William Chas. Gibson,
Colonial Secretary.

APPENDIX A.—V.

REGULATIONS for the LOCAL EXAMINATION OF CEYLON STUDENTS.—1870.

EXAMINATIONS will be held in Colombo, Kandy, Galle and Jaffna, and simultaneously in other places, if it be requested and found expedient.

The Examination will commence on the morning of Monday, the 5th December, 1870.

After the Examination, the names of the Students who pass with credit will be placed alphabetically in three Honor Classes, and the names of those who pass to the satisfaction of the Examiners, yet not so as to deserve honors, will be placed alphabetically in a separate Class. Marks of distinction will be attached to the name of any Candidate who may specially distinguish himself in particular parts of the Examination. After the name of every Student will be added his age, his place of residence, the School (if any) from which he comes to attend the Examination, and the name of his Schoolmaster.

In determining the Classes, account will be taken of every part of the Examination, but no credit will be given for knowledge of any section, unless the Student shew enough to satisfy the Examiners in that section. Regard will be paid to the handwriting and spelling throughout the Examination.

The Students who pass with credit, or satisfy the Examiners, will also be entitled to receive Certificates to that effect. Every Certificate will specify the subjects in which the Student has passed with credit, or satisfied the Examiners, and the class in which his name is placed.

Every one admitted to Examination will be required to pay a fee of Five shillings.

Students must be under 17 years of age on the day when the Examination begins.

The names of Students desirous of being examined, must be sent to the Director of Public Instruction, Colombo, on or before November 16th, 1870, together with

(1) Certificates of age.
(2) Certificates of good moral character, from their respective Schoolmasters; or, in the case of Students privately educated, from a Clergyman or Justice of the Peace.
(3) Statement of the subject in which they will offer themselves for Examination.
(4) Their fees.

The fees for all Students must be paid on or before November 16th, 1870. Fees from persons resident at outstations will be remitted by Government Drafts, on application at the Local Kachchéries.

PART I.—PRELIMINARY.

Every Student will be required to satisfy the Examiner in

(1) Reading aloud a passage from some standard English Prose author.
(2) Writing from Dictation.
(3) The Rudiments of English Grammar, including the analysis of sentences.
(4) The first four Rules of Arithmetic, Simple and Compound, Vulgar Fractions, Practice, and the Rule of Three.
(5) Geography.

Every Student will be required to answer questions on the subject, and to fill up one of the outline Maps in the following list, by inserting the chief ranges of mountains, the chief towns, and the chief rivers;—

Europe, Asia, Africa, North America, South America, India.

(6) The outlines of English History since the Conquest, that is, the succession of Sovereigns, and the chief events in each reign.

PART II.

The Examination will comprise the subjects mentioned in the following seven sections; and every Student will be required to satisfy the Examiners in two of those sections at least: but no one will be examined in more than four. Section I. must be taken by every Student.

I.—ENGLISH.

Every Student will be required to write an original composition.

He will also be examined in

English History, from the accession of James I. to the death of Anne.
Physical, Political, and Commercial Geography.
Trench, on the Study of words.

II.—LATIN.

Passages will be given from Cicero de Senectute for translation into English, with questions on the historical and geographical allusions, and also on grammar and parsing:

Also an easy passage for translation from some other Latin author:

And a passage of English, with Latin words supplied, for translation into Latin.

III.—GREEK.

Passages will be given from Xenophon's Memorabilia, Book I., for translation into English, with questions on the historical and geographical allusions, and also on grammar and parsing:

Also an easy passage for translation from some other Greek author.

PUBLIC INSTRUCTION.

Appendix A.—V.

IV.—Singhalese.

Passages will be given from Ummaggajataka, for translation into English, with questions on the historical and geographical allusions, and also on grammar and parsing :

Also a passage from some other Singhalese author, for translation into English :

And easy English sentences, for translation into Singhalese.

V.—Tamil.

Passages will be given from the Panchatantra, for translation into English, with questions on grammar and parsing :

Also a passage from some other Tamil author, for translation into English :

And easy English sentences, for translation into Tamil.

VI.—Pure Mathematics.

Every Student, who is examined in this section, will be required to satisfy the Examiners in Euclid, Books I. and II., Arithmetic, and Algebra to Simple Equations, inclusive.

Credit will be given for knowledge of Book-keeping.

Questions will also be set in Euclid, Books III., IV., and VI., in Quadratic Equations, Progressions, Proportion, Plane Trigonometry, not beyond the solution of Triangles, the use of Logarithms, and Mensuration.

VII.—The Elementary Principles of Mechanics.

Questions will be set, embracing the proofs of the leading Propositions.

They will not extend beyond the Parallelogram of Forces, the Centre of Gravity, and the Mechanical Powers.

PART III.

Students may also offer themselves for examination in

1. Geometrical and Mechanical Drawing, and Linear Perspective.
2. Drawing from the Flat, from Models, or from Memory.

Appendix A.—VI.

APPENDIX A.—VI.

Nominal List of the Successful Candidates for the Mathematical and Turnour Prizes, from 1846 to 1870.

	Mathematical Prize.		Turnour Prize.
1846	.....	Henry Ball } Æq. Francis Alwis } Æq.	.....	G. F. Nell C. A. Lorenz.*
1847	.....	N. Goonetilleke } Æq. R. Jansz } Æq.		
1848	.....	.....	.....	1. John Siebel 2. W. Van Dort. 3. A. De Livera.
1849	.....	James Pieris		
1850	.....	C. Wickremesekera	.....	James Pieris Adrian De Zoyza.†
1851	.....	F. Loos	.....	Coomaraswamy.
	.....	F. Dias (Proxime accessit.)		
1852	.....	W. Goonetilleke	.....	W. H. P. De Saram.
1853	.....	Chas A. Alvis		
1854	.....	.....	.....	W. Goonetilleke.
1855	.....	.....	.....	
1856	.....	.....	.....	
1857	.....	.....	.....	
1858	.....	.....	.....	
1859	.....	.....	.....	George Van Dort.
1860	.....	George Vandérstraaten	.....	C. Brito. T. E. Beven‡
1861	.....	C. Brito	.....	T J. De Alvis
1862	.....	S. Nevins	.....	
1863	.....	S. Tambyah	.....	W. G. Keith.
1864	.....	Annamaly	.....	F. Beven.
1865	.....	.....	.....	.....
1866	.....	.....	.....	.....
1867	.....	.....	.....	A. De Silva.
1868	.....	J Casie Chetty	.....	P. Arunasalem.
1869	.....	E. R. Anthonisz	.....	E. R. Anthonisz. §
1870	.....	.....	.....	S. Allegakoon.

* Additional Prize. † One-third of a Prize. ‡ Additional Prize. § Additional Prize.

APPENDIX A.—VII.

NOMINAL LIST of Senior and Junior Queen's Scholars from 1862 to 1870.

	SENIOR QUEEN'S SCHOLARS.		JUNIOR QUEEN'S SCHOLARS.
1862	.....	.....	Francis Beven.
1863	W. G. Keith	.....	E. S. Jayesinghe.
	A. P. Obeyesekere	.....	.....
1864	Francis Beven	.....	A. De Silva.
1865	J. J. Thiedeman	.....	Alfred Grenier
1866	.....	.....	E. R. Anthonisz.
1867	J. C. Weerasooria	.....	.....
1868	P. Arnasalem	.....	J. H. Ernst.
1869	.....	.....	R. G. Anthonisz.
1870	.....	.....	.....

APPENDIX B.

I.—LETTER from the Hon'ble the Colonial Secretary to the Director of Public Instruction.

II.—LETTER from the Director of Public Instruction to the Hon'ble the Colonial Secretary.

III.—LETTER from the Hon'ble the Colonial Secretary to the Director of Public Instruction.

IV.—EXTRACT from *Ceylon Government Gazette* of 25th December, 1869.

APPENDIX B.—I.

Colombo Academy.

LETTER from the Honorable the Colonial Secretary to the Director of Public Instruction.

No. 161. Colonial Secretary's Office,
Colombo, 25th November, 1869.

Sir,

With reference to your letter of the 23rd instant, submitting a scale of School fees to be charged in all Schools in the Island, I am directed to request that you will furnish me with a list of the classes into which the Colombo Academy is divided, and of the studies pursued in each class, and at the same time offer any suggestion you may have to make for amending the existing classification or course of study.

I have, &c.,
HENRY T. IRVING.

APPENDIX B.—II.

LETTER from Director of Public Instruction to the Honorable the Colonial Secretary.

No. 181. Office of Public Instruction,
Colombo, 10th December, 1869.

Sir,

1. In compliance with the instructions conveyed in your letter of 25th November, I have the honor to forward two statements received from the Principal of the Colombo Academy, respecting the number of classes in that Institution, and the studies pursued in each class.

2. Upon the contents of these papers I proceed (as requested by you) to make the following observations and suggestions.

Upper School.

3. It will be seen by reference to the statement accompanying Dr. Boake's letter of November 29th, that the Upper School of the Academy is now taught in five classes—containing respectively 6, 2, 13, 12, and 28 students.

4. The studies pursued in the first three of these classes are as follow:—

1st Class, Madras University course for the first Examination in Arts.

2nd Class, "Turnour Prize" course.

3rd Class, Entrance course of the Calcutta University.

5. I presume that the maintenance of classes for instruction in the course prescribed for Examinations at the Universities of Calcutta and Madras is a temporary arrangement, adopted in the absence of any definite instructions from Government on the subject of the course of study to be pursued in the Academy, in order to give effect to the decision by which the connection with the Calcutta University was dissolved, and prospective Scholarships at an English University established in lieu thereof.

6. The construction of a separate class for the "Turnour Prize" is also, I presume, due to some temporary exigency. The "Turnour Prize" is an incidental reward of trifling value, given annually for the encouragement of classical students, and, as classics form a part of the regular studies at the Academy, this object would be attained by simply awarding the prize to the best classic of the year, without reference to any particular course.

7. From the further information contained in the statement accompanying Dr. Boake's letter of December 2nd, it appears that there is little or no gradation in these three classes.

8. In all of them the subjects in English are of precisely the same calibre, and one book (the "Lay of the Last Minstrel") is common to both the 1st and 2nd classes, a portion of it being also read in the 3rd class.

9. In Latin, the 1st and 2nd classes are both reading the same orations of Cicero, and the 2nd and 3rd classes are occupied with different portions of the same book of Virgil (the Æneid).

10. There is a gradation in Mathematics as regards the quantity read; but in this respect the third class stands second, and the second third.

11. Between the work of the 5th and 4th classes, and of the 4th and those above it, a fair gradation appears to exist.

Lower School.

12. The Lower School contains 10 classes. The statement furnished by Dr. Boake gives the work done in each class since the 30th of August last. From this it appears that the first or highest class is in "Henry's First Book" in Latin, and has read 20 propositions of the 1st Book of Euclid. Algebra has no place in the list. As a preparation for the Upper School, therefore, the present course of study must be defective; it being obviously impossible that boys who pass from the 1st class in the Lower to the last class in the Upper School, with no greater stock of knowledge than this, can in a year's time have mastered a large amount of Algebra and four Books of Euclid,

PUBLIC INSTRUCTION.

Appendix B.—II.

and be competent to read Virgil and Cæsar (the work of the present fifth class, Upper School). But if they remain, as it would seem they must do, for more than one year in this last class, what becomes of those who come up from below at the next annual remove?

13. Moreover, on examining the English studies in these Lower School classes, it appears, that while the first class is in the 6th standard, the 2nd, 3rd and 4th are all in the 5th standard, the 5th, 6th, 7th, and 8th are in the 4th standard, the 9th in the 3rd, and the 10th in the 2nd, which is but one remove from the standard of an Alphabet class.

14. In other subjects also there is scarcely any marked distinction between the degrees of proficiency severally exhibited by the 2nd, 3rd, and 4th classes, and again by the 5th, 6th, 7th, and 8th classes: so that in place of one School composed of several classes separated by well defined and progressive steps, there would seem to be several Schools of equal rank; and whether a boy be in the 8th, 7th, 6th, or 5th class, or again in the 4th, 3rd or 2nd class, makes no other difference to him than that he learns the same things from a different teacher.

15. I am unable to make any recommendation respecting this condition of things short of a thorough revision of the classes, both in the Lower and Upper Schools.

16. Reverting to the resolutions of the Legislative Council, I would recommend that in future the final object to be worked up to in the Academy should be the competition for the English Scholarship.

17. With this end in view, I would recommend that a well defined course of eight years' study should be laid down, embracing all that a properly trained youth ought to know at the commencement of his undergraduate career.

18. This course should be divided between the Lower and Upper Schools, and the work of the Lower School should be made strictly subservient to, and should lead up to, the studies of the Upper School; and I would so draw the line between the two Schools, that the Lower School should of itself afford a complete course of instruction, sufficient for all ordinary and commercial purposes, to those whose circumstances required them to go no further. For those who passed into the Upper School a sound liberal training would be provided, with the added stimulus of a valuable prize to be competed for at the end of the course.

19. The mode in which I would effect this, would be as follows:—Abolishing altogether the rudimentary classes, I would require, as a qualification for admission to the Lower School, a knowledge of the four Simple Rules, and ability to read an ordinary Second Book. Beginning, then, in the lowest class with the Compound Rules and a Third Book, I would establish five classes in the Lower School, four of them corresponding to the third, fourth, fifth, and sixth standards of an English series, advancing in Arithmetic as far as is required for ordinary purposes, and laying a foundation in Latin, Algebra, and Euclid. The work in the fifth or highest class, should be of such a nature as to afford an adequate finish to the training of those who intended to go no further, and to constitute a real preparation for the work of the Upper School in the case of those who intended to proceed. General English literature should take the place of the class reading book, and the Latin, Euclid, and Algebra should be brought up to a corresponding stage of progress.

20. To this end it would be necessary that the instruction of this highest class, and the general direction of the classes below it, should be in the hands of a master possessed of a thorough acquaintance with the subjects taught in both the Upper and Lower branches of the establishment, and able, from having himself received a University training, to sympathise with and co-operate heartily in, the work of preparation for the Upper School: and for this purpose I could suggest no better arrangement than to entrust the responsibility of this branch of the Academy, under the Principal, to one of the two gentlemen now employed as English Assistants in the Upper School, with a suitable increase to his salary.*

21. Besides insisting that the rudiments of knowledge should be acquired—before admission to the Academy, I would further recommend that none should be admitted under ten years of age, nor to the lowest class above twelve. The Lower School would then form a compact and homogeneous institution, presenting a five years' course of study, which, commencing between the ages of ten and twelve, would be completed by a youth of fair abilities between the ages of fifteen and seventeen.

22. For those who might proceed to the Upper School, a three years' course should be provided, in three distinct classes, bringing the student up to the age of 18 or 20, and fitting him for entrance into an English University or for any professional career.

23. The carrying out of this scheme would require the reduction of the number of classes in the Upper School from five to three, and in the Lower School from ten to five. It would also involve the withdrawal of a considerable number of the pupils in the Lower School, the unrestricted admission of whom has probably been the main cause of the present condition of things.

24. For the instruction of these classes in the Upper School the staff would consist of the Principal, one English, and one country-born Assistant.

25. For the instruction of the five classes in the Lower School, the staff would consist of the Head Master, and four Assistants.

26. Six of the present Assistants in the Lower School (four adults and two Monitors) would, with their salaries, be detached from the establishment altogether. With the funds and teachers thus liberated an ordinary English School might at once be opened for the accommodation of those pupils who would be compelled to withdraw from the Academy. Such a School is in fact already required, and a numerously and most respectably signed petition for the establishment of one in the neighbourhood of Borella and Maradána, has now been awaiting consideration for nearly two years.

* * * * * * *

I have, &c.,

WALTER J. SENDALL,
for Director.

* NOTE.—This arrangement was afterwards abandoned, and the distinction between Upper and Lower School abolished.

STATEMENT which accompanied Dr. Bouke's Letter of 29th November, 1869.

Upper School.

Class 1st.—Six Students, studying course of Madras University for First Examination in Arts.

Class 2nd.—Two Students, studying Turnour Prize Course.

Class 3rd.—Thirteen Students, studying Entrance Course of Calcutta University.

NOTE.—For the Programme of Studies in these Classes, see page 35.

4TH CLASS.

Number in Class,—12.

Programme of Studies.

Latin.	English.	Mathematics	Geography & History.	Scripture.
Virgil, 1st Book, from line 320 to 2nd Book up to line 45. Latin Prose Composition, sections 58—141, Exercises 10 to 18, page 1, and pages 160—163 (Differences of Idiom).	Morrell's Grammar, Entrance Course of 1870, pages 2 to 8, 14 to 23, 36 to 47, and page 53 (Poetry) Chapter 1 to 28. The Mirage of Life, 150 to 187.	Euclid, 1st to 3rd Books up to 14, and 10 deductions Book 3rd. Arithmetic, Double Rule of Three, Proportional Parts, Interest. Algebra, Simple Equations Simultaneous Equations and Surds	Geography.—Asia, Africa, and the Geography of the places mentioned in the Indian History. History of India (Marshman), 4th & 5th chapters, and chapters 8th to 13th, 14 pages.	Text Book, pages 1 to half of the 19th, and 88 to 111. Reading Judges, Ruth, 1st Book of Samuel, Joshua, Acts, Romans (Geography of places occurring in the Bible).

5TH CLASS.

Number in Class,—28.

Programme of Studies.

Latin.	English.	Mathematic.	History & Geography.	Scripture
Cassell's Latin, pages 1 to 38 (Declensions of Nouns, Adjectives and Pronouns), pages 43 to 68 (Conjugations of Verbs), pages 105 to 120 (Exercises in translating Latin sentences into English, and vice versa), pages 132 to 143 (thirty-four chapters of the History of Joseph's life). Latin Prose Composition, pages 6 to 20 (Exercises 1—7).	Morrell's Grammar, pages 1 to 54, 66 to 96, and 104 to 111. Hiley's Grammar, new edition, pages 116 to 132 (Rules of Syntax), pages 195 to 203 (Figures of Speech), Exercises in Dictation, Parsing and the Analysis of simple and complex Sentences.	*Euclid.* Books 1 and 2 up to Proposition 9, about 9 easy deductions of the 1st Book. *Arithmetic* Simple Proportion, Simple Interest, Practice, Vulgar and Decimal Fractions. *Algebra.* Addition, Subtraction, Multiplication and Division, Greatest Common Measure, & Simple Equations.	Students' Hume, William I to Elizabeth. Cornwell's Geography, Europe, Asia, Africa, and England.	*Text* First 3 Chapters of Proverbs; Text Book, pages 1 to 6, and 70 to 101, Reading Ruth, and Samuel, Chapters 1 to 4, Luke, John, and Acts, Chapters 1 to 5. Geography of the places occurring in Scripture History, particularly in the New Testament.

PROGRAMME of Studies pursued in the Lower School of the Colombo Academy, from the commencement of the Term (August 30th, 1869).

Subjects.	Scripture.	English.	History.	Geography	Latin.	Geometry.	Arithmetic.
Class 1st, 37 Pupils.	Prophecies relating to the Messiah. 1st and 2nd Samuel and Daniel. John's Gospel and the Acts.	Hiley's Grammar, Etymology and Syntax. Reading. Standard No. 6.	Inces' History of England, William 1st to James 1st.	Reid's Modern Geography, Europe, Asia, Africa, and America.	Henry's First Book, Exercises 2 to 26.	Euclid, Book I, Props. 1 to 20	Simple and Compound Proportion, Simple and Compound Interest, and Fractions.
Class 2nd, 22 Pupils.	Prophecies relating to the Messiah. Judges and 1st Samuel. St Luke's Gospel.	Morrell's Grammar, Structure of Sentences. Hiley's Syntax. Standard No. 5.	Inces' History of England, William 1st to Richard 2nd.	Reid's Geography, Europe, Asia, Africa, and America	Cassell's Grammar, Declensions and Conjugations.	Euclid, Book I, Props. 1 to 21	Simple and Compound Proportion, Simple and Compound Interest, and Fractions.
Class 3rd, 29 Pupils.	Prophecies relating to the Messiah. 1st Samuel. St Luke's Gospel.	Hiley's Grammar, Orthography and Etymology. Standard No. 5.	Inces' History of England, William 1st to Richard 2nd.	Reid's Geography, England and Wales.	Declensions	Props. 1 to 5.	Practice and Fractions.
Class 4th, 31 Pupils.	Prophecies relating to the Messiah. Ruth and 1st Samuel Luke and John.	Hiley's Grammar, Orthography and Etymology. Standard No. 5.	Henry 3rd to Edward 1st.	Africa and North America.	Declensions.	Definitions, Postulates, & Axioms.	Reduction and Vulgar Fraction.
Class 5th, 36 Pupils.	Matthew. Chaps. 5, 6. and 7. Exodus and Joshua. St. Matthew's Gospel.	Orthography and Etymology. Standard No. 4.	Gleigs' History, from the beginning to Harold 1st.	South America, England and Wales.	—	—	Compound Rules and Reduction.
Class 6th, 26 Pupils.	Matthew, Chaps. V. to VII. Matthew, Chaps. 1 to 15.	Orthography and Etymology. Standard No. 4.	—	Europe and America.	—	—	Compound Rules and Reduction.
Class 7th, 18 Pupils.	Matthew. Chap. 6. Genesis, Chaps. 15 to 22. Matthew, Chaps 11 to 15.	Hiley's Child's Grammar, Orthography and Syntax. Standard No. 4.	—	Europe.	—	—	Compound Division.
Class 8th, 20 Pupils.	St. John, Chaps. 15, 16. St. Luke.	Orthography and Etymology. Standard No. 4.	—	Europe.	—	—	Compound Multiplication.
Class 9th, 23 Pupils.	St John, Chaps. 1 and 14. Exodus, Chaps. 1 to 7. St. Matthew, Chaps. 12 to 24.	Orthography and Etymology. Standard No. 3.	—	—	—	—	Compound Addition.
Class 10th, 24 Pupils.	St. Matthew, Chaps. 6 & 7. Exodus, Chaps. 6, 7, 8. Matthew's Gospel.	Orthography. Standard No. 2.	—	—	—	—	Simple Subtraction and Multiplication.

SUBJECTS for First Examination in Arts, Madras.—1869.

I.—English.

A selection of Papers from the Spectator.
The Lay of the last Ministrel.
Byron's Prisoner of Chillon.

II.—Latin.

Cicero.—Orations I. and II. against Cataline.
Horace.—The Epodes and De Arte Poetica.

III.—History and Geography.

Class 1.

(1.) History of India.
(2.) A selected portion of Ancient History.
(3.) Geography, with special reference to the political, social, and commercial condition of Countries.

IV.—Mathematics.

(1.) Arithmetic.—The whole subject.
(2.) Algebra.—Addition, Subtraction, Division, Involution, Evolution, Greatest Common Measure, Least Common Multiple, Simple and Quadratic Equations with problems, Proportion and Variation, Permutations and Combinations, Arithmetical, Geometrical, and Harmonical Progressions, Binomial Theorem.
(3.) Geometry.—Euclid Books 1, 2, 3, 4, 6, and 9 to Proposition 21.

SUBJECTS for Turnour Prize Examination, Ceylon.—1870.

Class 2.

I. English.—Scott's Lay of the Last Ministrel; Milton's Paradise Lost, Books 1 and 2.
II. Latin.—Æneid, Book VI. Cicero, Four orations against Cataline.
III. History of England.—Student's Hume, pp. 361—464, from the accession of James I. to the Restoration.
IV. Mathematics.—Algebra, Fractions, and Quadratics. Arithmetic, Decimals.
V. Abercrombie.—Philosophy of the Moral Feelings.

SUBJECTS of Entrance Examination, Calcutta.—1869.

I.—English.

Class 3.

Cowper.—Task, Book VI., Winter walk at noon.
Goldsmith's Edwin and Angelina.
Scott.—Introduction to the Lay of the Last Ministrel.
Byron.—Destruction of Sennacherib. Address to the Ocean.
Smith.—Address to the Mummy in Belzoni's Exhibition.
Defoe.—Extracts from Robinson Crusoe.
Dixon.—Extract from Life of Admiral Blake.
Smiles' Self Help, chapter 10th.

II.—Latin.

Virgil.—Æneid, Books 1 and 2.
Cæsar.—De Bello Gallico, Books 1 and 2.

III.—History and Geography.

The outlines of Ancient History; Marshman's History of India, Part I.; the outlines of General Geography, with a more detailed knowledge of the Geography of India.

IV.—Mathematics.

Arithmetic.—The four Simple Rules, Vulgar and Decimal Fractions, Reduction, Practice, Proportion, Simple Interest, Extraction of Square Root.
Algebra.—The four Simple Rules, Proportions, Simple Equations, Extraction of square Root, Greatest Common Measure, Least Common Multiple.
Geometry.—The first four Books of Euclid, with easy deductions.

APPENDIX B.—III.

LETTER from the Hon'ble the Colonial Secretary to the Director of Public Instruction.

No. 175. Colonial Secretary's Office,
Colombo, 13th December, 1869.

Sir,

I am directed by the Governor to acknowledge the receipt of your letter No. 181 of the 10th instant, on the subject of the Colombo Academy, and to convey to you His Excellency's approval of the scheme which you propose for its re-organization.

I am directed to authorize you to make the necessary arrangements for opening the School on the new system after the Christmas holidays, and also for the opening of an English School for the accommodation of the pupils who will be compelled to withdraw from the Academy.

* * * * * * *

I have, &c.,
Henry T. Irving.

APPENDIX B.—IV.

Extract from Ceylon Government Gazette of 25th December, 1869.

THE Colombo Academy will in future consist of eight Classes or Forms, of which the First Form will be the lowest and the Sixth Form the highest; the two forms next below the highest being styled the "Upper Remove" and the "Under Remove." The School will be in two Divisions, of which the Sixth Form, with the Upper and Under Removes, will form the Upper Division; and the Fifth, Fourth, Third, Second, and First Forms, the Lower Division.

2. For admission to the First (or lowest) Form, pupils must be between the ages of 10 and 12. They must know the four Simple Rules of Arithmetic, must be able to read with ease an ordinary English Second Book, and to write correctly a short dictation from the same.

3. The number in any Form will not be allowed to exceed 30.

The following monthly fees will be charged, payable for ten months in the year.

In the Sixth Form.....One Pound.
In the Upper and Under Removes.....Fifteen Shillings.
In the Fifth and Fourth Forms.....Ten Shillings.
In the Third, Second and First Form...Five Shillings.

5. Half-yearly Examinations, at which promotions will take place, will be held in June and December.

6. The English University will be awarded, and a public distribution of prizes throughout the School will take place, at the June Examination in each year; and the holder of the English Scholarship will be required to proceed to England and enter upon his University career in the succeeding October.

7. The "Turnour Prize" will be awarded at the June Examination to the best classical scholar in the Sixth Form.

8. Two Scholarships, of the annual value of £10, will also be awarded at the June promotions from the Lower to the Upper Division: they will be tenable for four years (subject to the condition that the holder shall pursue his studies in the Upper Division), and will be given to those students in the Fifth Form who shall shew the greatest proficiency, the one in the English and Classical, and the other in the Mathematical branches of instruction.

9. The first December Examination will take place in 1870, and the first June Examination in 1871.

10. The following is the course of instruction prescribed for each Form:—

LOWER DIVISION.

First Form.

An English Third Reading Book, with Grammar and Orthography. The four Compound Rules. Map of the World.

Second Form.

A Fourth Reading Book, with Grammar and Orthography. Arithmetic to Vulgar Fractions. Elements of General Geography. Latin Accidence.

Third Form.

A Fifth Reading Book, with Grammar and Orthography. Decimals and Proportion. Geography. Latin Grammar and Exercises.

Fourth Form.

A Sixth Reading Book, and History of England. Arithmetic to Interest and Discount. Geography. Latin Delectus. Euclid, Book I. Algebra, the four Rules.

Fifth Form.

An English Classic. English History. Geography. Arithmetic, the whole subject, for commercial purposes. Euclid, Books 1 and 2. Algebra to Simple Equations. An easy Latin author, or selections.

UPPER DIVISION.

Under Remove.

English Literature (including Composition). History of India. Three Books of Euclid. Algebra to Quadratic Equations (with problems). A Book of Cæsar and a Book of Ovid. Greek Grammar and Delectus.

Upper Remove.

English Literature (including Composition). History of India. Four Books of Euclid. Algebra. Elements of Mechanics. A Book of Cicero and a Book of Virgil. A Book of Xenophon.

Sixth Form.

Logic and Moral Philosophy. Horace *or* Juvenal, and Cicero *or* Tacitus. A Greek play *or* a Book of Homer; and a Book of Thucydides, *or* selections from Demosthenes. Six Books of Euclid. Algebra. Mechanics. Elements of Plane Trigonometry, including the Solution of Triangles. Elementary problems in Conic Sections, treated geometrically.

(Signed) WALTER J. SENDALL,
for Director.

Office of Public Instruction,
Colombo, 22nd December, 1869.

APPENDIX C.

I.—STATEMENT shewing the number of Pupils on the Rolls of the Government Schools on the 31st December, 1869, the Average Daily Attendance during the Year 1869, the Nations to which the Pupils belong, and the Religions which they profess.

II.—SUMMARY of Statement shewing the number of Pupils on the Rolls of the Government Schools on the 31st December, 1869, the Average Daily Attendance during the Year 1869, the Nations to which the Pupils belong, and the Religions which they profess.

III.—STATEMENT shewing the Annual Expenditure incurred under the head "Education," and the Receipts by Fees, from the Year 1849 to the Year 1869.

IV.—STATEMENT shewing the number of Pupils attending the Schools, in connection with the Department of Public Instruction, from the Year 1849 to the Year 1869.

V.—STATEMENT shewing the Expenditure incurred in each Province during 1869, under the head "Education."

VI.—ACCOUNT of the Receipts and Expenditure of the Department of Public Instruction from 1st January to 31st December, 1869.

APPENDIX C.—I.

STATEMENT shewing the Number of Pupils on the Rolls of the Government Schools on the 31st December, 1869, the Average Daily Attendance during the Year 1869, the Nations to which the Pupils belong, and the Religions which they profess.

DISTRICT.	NAME OF SCHOOL.	When established.	No. on the List on the 31st December.	Average Daily Attendance throughout the year.	NATION.									RELIGION.								
					English.	European Descendants	Sinhalese. Low Country.	Sinhalese. Kandyan.	Malabar. Natives of Ceylon.	Malabar. Immigrants.	Malays.	Moors.	Others.	Church of England.	Presbyterians.	Wesleyans.	Roman Catholics.	Christians of other Denominations.	Mohammadans.	Hindus.	Buddhists.	Others.
	English Schools. (*Male.*)																					
Colombo	Colombo Academy	1835	59	47	1	29	20	2	7	..	..	..	.	28	11	7	5	2	..	5	1	..
Do.	Do. Lower School	1857	259	236	17	105	101	3	15	1	5	10	2	97	56	12	30	13	16	10	24	1
Galle	Galle Central School	1857	101	109	2	33	65	..	..	.	..	1	..	18	12	10	10	..	1	..	50	..
Do.	Do. Lower School	1867	236	194	1	39	170	..	1	.	3	22	..	7	19	17	15	..	25	..	153	..
Kandy	Kandy Central School	1844	130	113	13	52	44	11	6	1	1	1	1	64	7	7	21	6	3	3	19	..
Colombo	Colombo Boys' School	1835	78	80	..	28	42	.	3	..	1	4	..	13	8	9	25	1	5	..	17	..
Do.	Grandpass Boys' School	1839	62	63	1	..	58	.	..	1	.	2	..	7	..	..	21	14	2	..	18	..
Kalutara	Kalutara do.	1836	102	95	..	25	67	..	7	..	..	3	..	2	9	6	20	..	3	..	62	..
Kurunégala	Kurunégala do.	1859	45	36	..	9	15	8	3	3	5	1	1	12	1	..	15	..	6	3	8	..
Mátara	Mátara do.	1866	77	50	..	18	55	..	1	..	2	1	..	3	11	2	4	..	3	..	54	..
Negombo	Negombo do.	1837	48	72	..	9	36	..	3	..	..	..	..	4	1	9	21	..	..	..	13	..
Pánaduré	Pánaduré do.	1835	114	110	..	1	109	..	..	..	1	3	..	17	..	10	4	..	4	..	79	..
Colombo	St. Thomas' do.	1833	65	60	..	19	36	..	10	..	..	..	..	7	10	2	25	2	..	4	15	..
	Anglo-Vernacular Schools. (*Male.*)																					
U'va	Badulla School	1836	40	36	..	3	24	4	1	..	5	3	..	12	..	..	8	..	8	1	11	..
Bentoṭa	Bentoṭa do.	1837	77	66	..	..	77	..	..	..	..	..	..	..	..	2	1	..	..	..	74	..
Milagriya	Milagriya do.	1859	60	53	..	..	60	..	..	..	..	..	..	28	..	4	8	..	..	..	20	..
Galle	Dodandúwa do.	1860	23	18	..	..	23	..	..	..	..	..	..	1	..	..	..	..	..	..	22	..
Udapaláta	Gampola do.	1850	45	41	..	2	33	6	..	..	..	4	..	4	..	..	5	..	4	..	32	..
Hambantoṭa	Hambantoṭa do.	1868	34	29	..	4	7	..	2	..	13	8	..	3	..	..	3	..	21	2	5	..
Héwágam Kóralé	Haṇwella do	1868	83	61	..	..	83	..	..	..	..	..	..	..	..	..	47	7	..	..	29	..
Colombo	Hulfsdorp Jail School	1857	40	36	..	1	10	17	.	4	..	..	8	3	2	5	5	6	..	..	19	..
Yaṭinuwara	Kaduganawa do.	1856	34	22	..	..	25	6	1	..	..	1	1	7	..	..	7	..	2	..	18	..
Galle	Kaluwella do.	1859	84	64	..	4	71	..	2	..	..	7	..	1	1	7	8	..	7	1	59	..
Alutkúru Kóralé	Kandána do.	1852	41	40	..	..	41	..	..	..	..	..	..	..	..	..	40	..	..	..	1	..
Kandy	Kandy do.	1844	118	111	..	..	50	40	11	.	12	5	..	7	..	1	12	3	17	11	67	..
Kégalla	Kégalla do.	1852	24	21	..	6	7	10	..	..	1	..	..	1	3	..	7	..	1	..	12	..
Colombo	Kollupitiya do.	1844	100	87	..	3	95	..	..	..	..	2	..	8	..	18	37	..	2	..	35	..
Chilaw	Madampe do.	—	24	22	..	..	24	..	..	..	..	..	..	12	..	..	3	..	..	..	9	..
Tumpané	Madawalatenna do.	1855	35	28	..	1	5	27	..	..	1	1	..	..	1	..	1	..	2	..	31	..
Kalutara	Maggona do.	1863	50	39	..	..	50	..	..	..	..	..	..	2	..	..	32	..	..	..	16	..
Mannár	Mannár do.	1838	12	12	..	5	..	..	6	..	..	1	..	5	..	..	4	..	1	2	..	..
Colombo	Maradána do.	1844	158	128	..	9	140	..	..	3	5	1	..	22	..	9	27	..	7	..	93	..
Mátalé	Mátalé do.	1850	60	40	1	4	34	9	4	..	8	..	..	3	..	..	15	8	8	3	23	..
Mullaittívu	Mullaittívu do.	1847	25	24	..	..	.	.	25	..	..	..	..	..	2	..	12	..	1	10	..	..
Nuwara Eliya	Nuwara Eliya do.	1850	20	17	..	5	12	2	..	1	..	..	..	2	..	..	13	..	..	1	4	..
Puttalam	Puttalam do.	1868	37	26	..	1	6	..	17	..	7	2	4	3	..	..	24	..	9	..	1	..

APPENDIX. C.—I. *(continued.)*

DISTRICT.	NAME OF SCHOOL.	When established.	No. on the List on the 31st December.	Average Daily Attendance throughout the year	NATION.									RELIGION.								
					English.	European Descendants.	Sinhalese.		Malabar		Malays.	Moors.	Others.	Church of England.	Presbyterians.	Wesleyans.	Roman Catholics.	Christians of other Denominations.	Mohammadans.	Hindus.	Buddhists.	Others.
							Low Country.	Kandyan.	Natives of Ceylon.	Immigrants.												
Ratnapura	Ratnapura School	1837	53	45	.	11	23	14	.	..	..	3	2	20	..	..	9	1	5	..	18	..
Trincomalee	Trincomalee do.	1849	46	42	..	..	..	.	43	..	..	3	..	..	..	..	..	..	3	43	..	..
Udunuwara	Weligalla do.	1859	31	20	.	1	11	12	..	..	..	7	..	4	..	1	..	..	7	..	19	..
Mátalé	Udatenna do.	1859	17	12	..	..	3	12	2	.	..	..	..	..	..	..	2	.	..	..	15	..
Lower Dumbara	Walala do.	1868	31	18	..	..	3	28	..	..	..	..	..	..	..	..	..	..	.	..	31	..
Colombo	Wĕlikada Jail School	1845	280	212	6	3	79	130	20	20	..	20	2	16	..	..	44	2	24	24	170	..
Mátara	Wĕligama do.	1845	30	25	..	..	29	..	..	..	..	1	..	2	..	..	..	..	1	..	27	..
	Vernacular Schools. (Male.)																					
Raygam Kóralé	Alubómulla School	1869	57	29	..	..	57	..	..	..	..	..	..	..	..	..	..	..	..	..	57	..
Negombo	Andiambalama do.	1856	66	55	..	..	65	1	..	..	..	..	..	..	..	21	28	..	..	..	17	..
Colombo	Attidiya do.	1852	40	30	..	..	40	..	..	..	..	..	..	6	..	5	13	..	..	..	16	..
Kalutara	Bandáragama do.	1847	40	25	..	..	40	..	..	..	..	..	..	..	..	5	..	..	..	..	..	35	..
Do.	Béruwala do.	1847	66	62	..	..	66	..	..	..	..	..	..	..	..	1	54	..	..	..	11	..
Colombo	Biyanwila do.	1868	56	48	..	..	56	..	..	..	..	..	..	..	..	..	31	..	..	..	25	..
Do.	Biyagama do.	1866	51	41	..	..	51	..	..	..	..	..	..	..	..	..	..	3	..	..	48	..
Do	Dandugama do.	1851	66	46	..	..	66	..	..	..	..	..	..	..	..	7	58	..	..	..	1	..
Do.	Dehiwala do.	1847	31	28	..	..	31	..	..	..	..	..	..	5	..	5	9	..	..	..	12	..
Mátara	Dikwĕlla do.	1868	21	19	..	..	24	..	..	..	..	..	..	..	..	.	.	..	..	..	24	..
Do.	Godapiṭiya do.	1866	29	23	..	..	29	..	..	..	..	..	..	..	..	7	..	..	..	..	22	..
Negombo	Godigamuwa do.	1868	50	31	..	..	50	..	..	..	..	..	..	..	..	..	39	..	..	..	11	..
Mátara	Hakmana (Ranchágoḍa) School	1868	28	18	..	..	..	..	28	..	..	..	..	..	..	.	.	.	..	..	28	..
Colombo	Halpitiya do.	1868	64	43	..	..	64	..	..	..	..	..	..	.	..	..	2	3	..	..	59	..
Do.	Hapugahakanda do.	1866	40	36	..	..	40	..	..	..	..	..	..	..	..	..	6	1	..	..	33	..
Do.	Hinkenda do.	1865	104	87	..	.	104	..	..	..	..	..	..	5	..	..	66	5	..	..	28	..
Do.	Henaratgoḍa do.	1856	62	44	..	..	62	..	..	..	..	..	..	1	..	..	15	..	..	..	46	..
Do.	Indibetta do.	1858	52	35	..	..	52	..	..	..	.	..	.	10	..	27	4	..	..	..	11	..
Negombo	Kandawala do.	1866	65	45	..	..	63	..	..	..	..	..	2	..	..	4	59	..	..	..	..	2
Colombo	Kandéliyaddepáluwa do.	1866	54	41	..	..	54	..	..	..	..	..	..	..	..	..	8	..	..	..	46	..
Negombo	Katána do.	1856	124	96	..	..	124	..	..	..	..	..	..	..	..	5	119	..	..	..	..	..
Do.	Kattuwa do.	1869	50	37	..	..	50	..	..	..	..	..	..	..	..	..	50	..	..	..	..	..
Colombo	Katubedda do.	1868	45	34	..	..	45	..	..	..	..	..	..	16	..	6	9	..	..	..	14	..
Do.	Kaṭukurunda do.	1857	54	45	..	..	54	..	..	..	..	..	..	21	..	6	1	..	..	..	26	..
Do.	Kohilawatta do.	1848	40	31	.	..	40	..	..	.	..	..	..	4	..	..	3	..	..	..	33	..
Kalutara	Maggona do.	1857	144	108	.	..	143	..	.	..	..	1	..	..	..	..	135	..	1	..	8	..
Colombo	Mahara do.	1859	55	40	..	..	55	..	..	..	..	..	..	..	..	..	41	..	..	..	14	..
Do.	Mantirimulla do.	1863	35	31	..	..	35	..	.	..	..	..	..	1	..	1	..	..	..	..	33	..
Do.	Maṭṭakkuli do.	1847	145	104	.	..	145	..	.	..	..	..	..	4	2	3	122	11	..	..	3	..
Mátalé	Mátalé (Tamil) do.	1858	20	18	..	1	..	6	3	2	8	..	..	.	..	..	3	..	8	8	1	..
Negombo	Miriswatta do.	1867	48	34	..	..	48	..	.	..	..	..	..	..	..	17	24	..	..	..	7	..
Mátara	Madihe (Mátara Gravets) do.	1868	35	28	..	..	35	..	..	..	..	..	..	..	..	..	..	..	..	..	35	..
Kalutara	Pánaduré No. 1 do.	1865	47	36	..	..	47	..	..	..	..	..	..	2	..	2	..	..	..	..	43	..
Do.	Do. No. 2 do.	1862	53	34	..	..	53	..	..	..	..	..	..	..	..	..	1	..	..	..	52	..

Colombo	Péliyagoda	1852	71	64	..	..	71	..	..	..	..	..	..	..	..	..	36	6	..	..	29	..
Do.	Pamunugama	1856	80	61	..	..	80	..	..	..	..	..	..	..	..	..	80	..	..	..	..	..
Do.	Pattiwilla	1864	67	41	..	..	67	..	..	..	..	..	..	..	..	..	4	..	..	..	68	..
Kalutara	Payyágala	1847	77	63	..	.	77	..	..	..	..	..	..	..	..	..	53	..	..	..	24	..
Negombo	Sidúwa	1847	53	43	..	..	53	..	..	..	..	..	..	..	..	32	21	..	..	..	..	..
Colombo	Slave Island	1847	47	38	..	..	47	..	..	..	4	..	..	..	..	..	12	3	4	..	28	..
Pánaduré	Tantirimulla	1866	37	33	..	..	37	..	..	..	..	..	..	..	..	..	..	..	..	..	37	..
Negombo	Tillanduwa	1868	70	52	..	..	70	..	..	..	..	..	..	..	2	..	68	...	..	..	..	..
Mátara	Udawaka (Morowakka)	1868	14	15	..	..	14	..	..	..	..	..	..	..	..	..	..	..	..	..	14	..
Negombo	Udugampola	1867	85	70	..	..	85	..	..	..	..	..	..	..	..	..	6	9	..	..	70	..
Kalutara	Wádduwa	1865	107	74	..	..	107	..	..	..	..	..	..	..	..	..	24	..	..	..	83	..
Colombo	Weligampitiya	1856	92	79	..	..	92	..	..	..	..	..	..	..	..	2	88	..	..	..	2	..
Do.	Warágoda	1859	54	44	..	..	54	..	..	..	..	..	..	2	..	1	24	..	..	..	27	..
Kalutara	Waskaduwa (Póhaddaramulla)	1863	26	26	..	..	26	..	1	..	..	..	..	..	..	..	..	..	..	1	25	..
Colombo	Wattala	1847	66	40	..	..	66	..	..	..	.	..	..	..	..	..	58	..	..	..	8	..
Do.	Watugoda	1866	39	29	..	..	39	..	..	..	..	..	..	1	..	..	..	1	..	..	37	..
Kalutara	Wéwita	1865	41	27	..	..	41	..	..	.	..	..	..	1	..	..	..	..	..	..	40	..
	English Schools. (Female.)																					
Colombo	Colombo Girls' School	1843	92	89	..	90	2	.	..	..	..	..	..	20	49	3	10	9	..	1	..	..
Do.	Female Seminary	1842	92	98	3	69	20	..	..	..	..	..	..	23	45	13	8	2	..	..	1	..
Galle	Galle Girls' School	1842	55	40	16	37	2	..	..	..	.	..	..	22	16	13	4	..	..	..	..	..
Jaffna	Jaffna do.	1860	26	24	2	17	.	..	7	..	..	..	..	17	5	4	..	..	..	..	..	..
Kandy	Kandy do.	1850	52	41	8	36	6	2	..	..	..	..	..	27	18	2	3	2	..	..	..	..
Kurunégala	Kurunégala do.	1864	22	16	..	14	3	5	..	..	..	..	..	14	8	..	..	..	..	..	..	..
	Anglo-Vernacular Schools (Female.)																					
Colombo	Borella Girls' School	1842	24	22	..	..	24	..	..	..	..	..	..	5	..	..	3	..	..	..	16	..
U'va	Badulla	1858	14	9	..	8	6	.	.	..	.	..	..	13	..	..	1	..	..	..	..	..
Udapaláta	Gampola	—	25	14	1	9	11	1	2	1	..	..	..	7	1	..	14	3	..	..	..	..
Hambantota	Hambantota	1867	5	7	..	..	3	..	..	..	2	..	..	1	..	..	..	..	2	..	2	..
Kalutara	Kalutara	1850	21	24	..	10	7	..	4	..	..	..	..	5	5	3	2	..	..	..	6	..
Mátara	Mátara	1857	53	59	3	44	6	..	..	..	..	..	..	13	30	1	3	.	..	..	6	..
Mátalé	Mátalé	1861	23	13	2	5	15	..	..	1	..	..	..	17	2	..	2	2	..	..	..	..
Negombo	Negombo	1861	30	24	..	19	11	..	..	..	..	..	..	3	7	6	14	.	..	..	..	..
	Vernacular Schools. (Female.)																					
Colombo	Attidiya	1868	28	21	..	..	28	..	..	..	..	..	..	..	..	3	..	..	..	..	25	..
Kalutara	Bandáragama	1865	22	14	..	..	22	..	..	..	..	..	..	..	..	1	..	..	..	..	21	..
Do.	Gelanigama	1866	38	26	..	..	38	..	..	..	.	..	..	1	..	..	..	..	..	..	37	..
Colombo	Indibetta	1860	43	33	..	..	43	..	..	..	..	..	..	11	..	24	1	..	..	..	7	..
Kalutara	Maggona	1862	49	30	..	..	49	..	..	.	..	..	..	..	..	1	43	..	..	..	5	..
Do.	Pánaduré No. 1.	1859	30	21	..	..	30	..	.	..	..	..	..	3	..	..	..	..	..	..	27	..
Do.	Do. No. 2.	1851	50	35	..	..	50	..	..	..	..	..	..	1	..	..	..	..	.	..	49	..
Colombo	Pamunugama	1867	37	28	..	..	37	..	..	..	..	..	..	..	..	..	37	..	..	..	..	..
Do.	Péliyagoda	1868	94	64	..	..	89	..	..	..	5	..	..	..	..	3	55	2	..	..	34	..
Mátara	Paramulla (Mátara Gravets)	1868	30	13	..	..	30	..	..	..	..	..	..	..	..	2	..	..	..	..	28	..
Trincomalee	Trincomalee (Tamil)	1846	39	31	..	6	.	..	33	..	..	..	..	.	..	2	18	..	..	19	..	..
Colombo	Weligampitiya	1865	35	27	..	..	35	..	..	..	..	..	..	..	..	..	35	..	..	..	..	..
Kalutara	Desastera Kalutara	1869	73	57	..	..	73	..	..	..	..	..	..	..	..	2	1	..	..	..	70	..
	TOTAL		7156	5781	77	795	5392	356	268	38	89	118	23	727	344	378	2218	127	213	152	2994	8

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APPENDIX C—II.

SUMMARY of STATEMENT shewing the Number of Pupils on the Rolls of the Government Schools on the 31st December, 1869, the Average Daily Attendance during the Year 1869, the Nations to which the Pupils belong, and the Religions which they profess.

SCHOOLS.	No. of Schools.	No. on the List on the 31st December.	Average Daily Attendance throughout the year	NATION.									RELIGION.								
				English.	European Descendants.	Sinhalese. Low-Country.	Sinhalese. Kandyan.	Malabars. Natives of Ceylon.	Malabars. Immigrants	Malays.	Moors	Others.	Church of England.	Presbyterians.	Wesleyans.	Roman Catholics.	Christians of other Denominations	Mohammedans.	Hindus.	Buddhists.	Others
English Boys' Schools	12	1376	1265	35	367	518	24	56	6	18	48	4	279	145	91	216	38	68	25	513	1
Anglo-Vernacular Boys' Schools	30	1712	1395	7	63	1625	317	134	28	52	69	17	166	9	47	374	27	130	98	861	0
Vernacular Boys' Schools	51	2966	2261	0	1	2909	7	32	2	12	1	2	79	4	157	1374	42	13	9	1286	2
Total, Boys'	93	6054	4921	42	431	4752	348	222	36	82	118	23	524	158	295	1964	107	211	132	2660	3
English Girls' Schools	6	339	308	29	263	33	7	7	0	0	0	0	123	141	35	25	13	0	1	1	0
Anglo-Vernacular Girls' Schools	8	195	152	6	95	83	1	6	2	2	0	0	64	45	10	39	5	2	0	30	0
Vernacular Girls' Schools	13	568	400	0	6	524	0	33	0	5	0	0	16	0	38	190	2	0	19	303	0
Total, Girls'	27	1102	860	35	364	640	8	46	2	7	0	0	203	186	83	254	20	2	20	334	0
TOTAL—	120	7156	5781	77	795	5392	356	268	38	89	118	23	727	344	378	2218	127	213	152	2994	3

STATEMENT shewing the Annual Expenditure incurred under the Head "Education," and the Receipts by Fees, from the Year 1849 to the Year 1869.

YEAR.	Fixed Establishment.	Provisional Establishment.	Rent.	Education, exclusive of Establishments.	Transport.	Total.	Receipts by Fees, &c.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1849	3382 8 5¼	2911 11 2	547 19 0	952 16 4	30 4 0	7824 18 11¼	936 12 7½
1850	2598 18 9¾	3171 4 7¼	537 19 7½	973 13 10½	—	7281 16 10¾	1094 13 9¼
1851	2997 18 10½	3808 4 4¾	547 14 0	1301 19 6¾	68 8 0	8724 4 10	1157 19 9
1852	3119 3 2½	4548 18 1¾	578 11 10¼	1332 3 3½	37 16 0	9616 12 6	1158 19 6½
1853	3144 11 3¼	4575 5 11¼	573 5 0	1730 15 8½	100 0 0	9923 17 11¼	937 19 1¾
1854	3109 11 0	4829 19 10	543 14 0	1794 0 2¼	49 16 0	10127 1 0¼	765 6 7½
1855	2927 1 6½	4533 6 8	537 4 0	998 0 5	72 10 0	8978 2 7¼	876 19 2¾
1856	2552 10 2	4680 8 9	496 2 0	1026 5 10½	82 10 0	8847 16 9½	843 8 9½
1857	2518 3 10	5060 11 6	502 3 6	1114 18 1	80 1 6	9275 18 5	1164 15 1¾
1858	2757 19 4	5521 13 11½	558 0 6	1533 10 9	147 5 0	10318 9 6½	1358 6 3¼
1859	2912 7 2	6934 4 1¾	634 4 7	2065 10 6¾	177 3 6	12723 9 11½	1691 10 8¼
1860	2867 17 3	7776 13 5¾	665 19 4	1829 6 1½	225 6 0	13565 2 4¼	1997 2 4
1861	3056 6 8	8597 1 7	768 6 4	1709 19 2½	374 18 5	14506 12 2½	2054 11 11
1862	3054 19 0¼	8890 7 7½	728 14 3	1182 12 11	242 13 9	14099 7 6¾	2203 18 4½
1863	3138 3 3½	9102 4 4½	739 15 0	1226 5 4	313 15 7	14520 3 7	2241 4 8
1864	3266 2 5½	9680 16 5	802 7 11	1150 1 5¼	432 4 1	15331 12 3¾	2138 14 8¾
1865	3311 16 8	8773 11 9½	792 3 4½	1395 11 6	400 9 9	14673 13 1	2038 15 8
1866	3205 6 8	9062 5 0	831 5 2	1453 14 3¾	322 14 0	14875 5 1¾	2154 3 0
1867	2952 1 0	9636 10 7	884 14 4	1533 3 4	495 7 0	15301 16 3	2461 8 8
1868	3206 7 0	9886 18 9	924 8 0	1684 12 10	463 13 6	16166 0 1	2728 19 7
1869	3145 6 8	10529 10 0	900 0 6	1461 10 8½	430 10 3	16466 18 1½	2555 19 5

PUBLIC INSTRUCTION.

Appendix C.—IV

APPENDIX C.—IV.

STATEMENT shewing the Number of Pupils attending the Schools in connection with the Department of Public Instruction, from the Year 1849 to the Year 1869.

Years	Superior Schools.		English Schools.		Anglo-Vernacular Schools.		English Girls' Schools.		Anglo-Vernacular Girls' Schools.		Vernacular Girls' Schools.		Vernacular Boys' Schools.		Jaffna Grant Schools.		Missionary Grant Schools.		Private Grant Schools.		Total Number of Schools.	Total Number of Pupils.
	Schools.	Pupils.	Schools.	Pupils.	Schools.	Pupils.	Schools.	Pupils.	Schools.	Pupils.	Schools.	Pupils.	Schools.	Pupils.	Schools.	Pupils.	Schools.	Pupils.	Schools.	Pupils.		
1849	...	...	...	...	...	...	...	...	...	...	9	...	...	...	...	...	0	0	0	0	...	3216
1850	3	124	11	572	39	1310	3	225	12	313	9	227	18	741	28	1428	0	0	0	0	114	4931
1851	3	148	11	528	32	1204	3	227	10	315	8	219	31	1422	31	1402	0	0	0	0	129	5460
1852	3	222	10	474	37	1368	4	292	13	360	7	198	35	1541	30	1443	0	0	0	0	139	5898
1853	3	214	9	430	37	1351	4	271	10	246	4	96	29	1307	26	1443	0	0	0	0	122	5448
1854	3	193	9	463	33	1272	4	249	8	243	6	243	29	1247	39	1862	0	0	0	0	131	5732
1855	3	165	9	578	34	1339	4	319	6	208	6	158	20	1220	21	854	0	0	0	0	112	4836
1856	4	281	9	446	32	1201	4	312	7	279	3	87	42	1267	14	743	0	0	0	0	115	4566
1857	4	161	9	454	31	1235	3	301	7	290	3	87	41	1225	15	681	0	0	0	0	114	4434
1858	4	324	8	507	29	1165	3	337	1	272	3	82	42	1280	14	722	0	0	0	0	112	4696
1859	3	361	9	644	40	1570	4	330	9	358	4	107	44	1518	17	886	20	1191	2	280	152	7145
1860	3	502	8	586	36	1497	4	349	6	279	6	251	39	2215	21	1114	20	1337	3	343	146	8473
1861	3	486	9	672	36	1397	5	335	10	338	5	209	38	2170	18	895	5	265	4	517	133	7484
1862	3	578	9	641	36	1301	5	319	10	307	7	230	35	1922	6	393	8	478	4	553	123	6942
1863	3	547	9	705	38	1527	6	369	10	326	8	286	35	1988	6	475	7	354	4	559	121	7146
1864	3	476	8	654	37	1382	6	286	9	243	8	267	37	1924	6	450	7	347	4	471	125	6500
1865	3	477	8	558	31	1319	5	264	10	282	8	250	38	2141	6	492	7	371	4	456	120	6610
1866	3	535	9	617	34	1438	6	275	8	233	9	325	42	2471	6	503	8	372	3	287	128	7056
1867	3	803	9	676	30	1430	6	341	8	209	9	328	43	2762	5	443	9	412	3	426	125	7830
1868	3	851	9	717	32	1712	6	340	9	237	12	534	51	3070	5	512	10	508	3	390	140	8391
1869	...	...	12	1376	30	1712	6	339	8	195	13	568	51	2966	5	643	10	541	5	411	140	8751

APPENDIX C.—V.

STATEMENT shewing the EXPENDITURE incurred in each Province during 1869, under the Head "EDUCATION."

	PROVINCES						Total.
	Western.	North-Western.	Southern.	Eastern.	Northern	Central.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
SALARIES, FIXED....	2012 0 0	...	450 0 0	...	200 0 0	450 0 0	3112 0 0
Do. PROVISIONAL AND TEMPORARY	6929 4 11	441 10 0	1428 10 0	113 0 0	123 0 0	1524 11 9	10562 16 8
EDUCATION.							
ALLOWANCES.							
Grant-in-aid to the New Chetty Street Girls' School	36 0 0	...	...	...	...	...	36 0 0
Do. Kotahéna Girls' School	6 0 0	...	...	...	...	...	6 0 0
Do. Mutwall Boys' School	27 0 0	...	...	...	...	...	27 0 0
Senior Queen's Scholarship	21 13 4	..	...	...	...	...	21 13 4
Junior Queen's Scholarship	20 0 0	...	..	...	...	..	20 0 0
Grant-in-aid to Schools.							
Do. Chilaw Boys' English School	...	18 0 0	...	...	...	...	18 0 0
Do. Batticaloa English School	...	...	...	61 10 0	...	...	61 10 0
Do. Puliyantivu Tamil Girls' School	...	...	..	18 0 0	...	...	18 0 0
Do. Kalladi Tamil Boys' School	...	...	...	6 0 0	...	...	6 0 0
Do. Trincomalee Girls' English School	...	...	...	48 0 0	...	...	48 0 0
Do. Trincomalee Boys' do.	...	...	...	60 0 0	...	...	60 0 0
Do. Wesleyan Boys' do.	.	...	...	63 0 0	...	...	63 0 0
Do. Batticotta High School	...	...	...	...	100 0 0	...	100 0 0
Do. Mánipáy English School	...	...	..	...	36 0 0	...	36 0 0
Do. Point Pedro English School	...	...	...	...	52 10 0	.	52 10 0
Do. Wesleyan Mission, Jaffna	...	...	...	...	200 0 0	...	200 0 0
Do. Roman Cathobe Mission, Jaffna	...	...	...	...	200 0 0	...	200 0 0
Do. Kandy Industrial School	..	...	...	...	..	50 10 0	50 10 0
CONTINGENCIES.							
Stationery for Schools, Books, Furniture, Repairs and other expenses	289 8 1	4 14 0	50 2 9	7 10 5	8 9 0	39 18 1½	400 2 4½
Allowance to Clerk in charge of School Books	17 10 0	...	...	...	...	...	17 10 0
Allowance for sewing Materials	5 5 0	2 0 0	1 0 0	...	...	1 10 0	9 15 0
Mathematical Prize	10 0 0	...	...	...	...	...	10 0 0
RENT							
Rent of School-houses, &c	416 10 0	8 12 6	289 2 0	9 12 0	43 10 0	132 14 0	900 0 6
TRANSPORT.							
Travelling Allowances to Director, Inspector, and Sub-Inspector	430 10 3	...	...	...	...	...	430 10 3
£.....	10221 1 7	477 16 6	2218 14 9	386 12 5	963 9 0	2199 3 10½	16466 18 1½

APPENDIX C.—VI.

ACCOUNT of the RECEIPTS and EXPENDITURE of the DEPARTMENT of PUBLIC INSTRUCTION from 1st January to 31st December, 1869.

RECEIPTS.

	£	s	d
AMOUNT RECEIVED FROM THE TREASURY on account of VOTES	13910	18	8½
Do. by FEES	2468	19	8
Do. by SALE OF STATIONERY	86	19	9
£.	16,466	18	1½

EXPENDITURE.

		£	s.	d.	£	s.	d.
COST OF GOVERNMENT SCHOOLS.							
Salaries		11883	11	8			
Rent		886	0	6			
Stationery, Books, Furniture Repairs, and other Expenses		292	10	6½			
Mathematical Prize		10	0	0			
Allowance for sewing materials		9	15	0			
Senior Queen's Scholarship		21	13	4			
Junior do. do.		20	0	0			
					13123	11	0½
GRANTS-IN-AID.							
Private Schools		222	10	0			
Missionary Schools		360	0	0			
Northern Province Schools		400	0	0			
					982	10	0
COST OF GENERAL MANAGEMENT.							
Office Expenses							
Salaries of Director, Clerks, &c	£1141	5	0				
Stationery, Books, Furniture, &c	107	11	10				
Rent	14	0	0				
Allowance to Clerk in charge of School Books	17	10	0				
				1280	6	10	
Inspection Expenses.							
Salary of Inspector	£500	0	0				
Salary of Sub-Inspector	150	0	0				
Travelling Expenses of Director, Inspector, and Sub-Inspector	430	10	3				
				1080	10	3	
£					16466	18	1½

APPENDIX D.

I.—TABULAR Statement shewing the Receipts, Cost, and State of Government Schools during the Year 1869.

II.—ABSTRACT of Receipts, Cost, and State of Government Schools in the several Provinces, during the Year 1869.

III.—ABSTRACT of Receipts, Cost, and State of the several Classes of Government Schools during the Year 1869.

IV.—NOMINAL Return of Teachers employed in the Government Schools.

APPENDIX D.—I.

TABULAR STATEMENT shewing the RECEIPTS, COST, and STATE of Government Schools during the Year 1869.

NAMES.	Monthly Rate of Fees.	Number of Pupils on List.	Average Daily Attendance.	RECEIPTS. Fees.	RECEIPTS. Stationery.	RECEIPTS. Total.	CHARGES. Salaries.	Rent.	Furniture.	Books, &c.	Stationery.	Sundries.	Proportionate Cost of Departmental Expenses.	Total.	Cost of educating each Pupil for One Year. By Receipts.	Cost to Government.	Total.
WESTERN PROVINCE.	s. d. s. d.			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
English School. (Male.)																	
Colombo Academy	15 & 10 0	59	47	354 17 6	—	354 17 6	1609 3 0	—	5 14 0	—	1 15 8	—	18 11 3½	1635 3 11½	6 0 3½	21 14 0	27 14 3½
Do. Lower School	5 & 3 6	259	236	467 7 3	—	467 7 3	811 16 0	—	—	—	1 15 8	—	81 9 7½	895 1 3½	1 16 0½	1 13 0½	3 9 1¼
		318	283	822 4 9	—	822 4 9	2420 19 0	—	5 14 0	—	3 11 4	—	100 0 11	2530 5 3	7 16 4½	23 7 0½	31 3 4½
Grandpass	1 6	62	63	53 19 6	—	53 19 6	148 10 0	42 0 0	—	1 2 0	0 8 11	—	19 10 2	211 11 1	0 17 4½	2 10 9½	3 8 2½
Colombo Boys'	1 6	78	80	71 10 3	—	71 10 3	232 10 0	60 0 0	—	—	0 15 10	—	24 10 10	317 16 8	0 18 4	3 3 1¾	4 1 5¾
Kalutara	1/6& 6	102	95	42 19 9	—	42 19 9	207 0 0	—	—	—	0 11 10	0 0 5	32 1 10	239 14 1	0 8 5½	1 18 6½	2 7 0
Colombo Industrial	1	60	53	2 6 8	0 8 8	2 15 4	51 0 0	—	—	2 13 9	0 13 7	—	18 17 7	73 4 11	0 0 11	1 3 5¾	1 4 4½
Negombo	1 6	48	72	67 10 9	0 2 0	67 12 9	177 10 0	30 0 0	—	—	0 11 10	0 0 4	15 2 1	223 4 3	1 8 2	3 4 10¾	4 13 0¾
Pánaduré	1/6 & 6	114	110	69 10 6	3 10 4	73 0 10	247 0 0	—	—	—	3 19 6	0 0 9	35 17 4	286 17 7	0 12 9¾	1 17 6	2 10 3½
St. Thomas'	1 6	65	60	61 2 6	--	61 2 6	232 10 0	42 0 0	—	0 17 0	0 13 6	—	20 9 0½	296 9 6½	0 18 9¾	3 12 4¾	4 11 2½
Anglo-Vernacular Schools (Male.)																	
Hapwella	6	83	61	10 11 3½	1 13 8	12 4 11½	72 0 0	—	18 15 5	0 4 10	1 7 6	0 5 7	26 2 3½	118 15 7½	0 2 11¼	1 5 8	1 8 7½
Hulfsdorp Jail	No Fees	40	36	—	—	—	24 0 0	—	—	—	—	—	12 11 9	36 11 9	—	0 18 3½	0 18 3½
Kandána	6	41	40	12 3 9	—	12 3 9	75 0 0	9 0 0	—	—	0 13 7	0 0 4	12 17 11½	97 11 10½	0 5 11¼	2 1 7½	2 7 7
Kégalla	6	24	21	6 1 0	1 10 0	7 11 0	48 0 0	—	—	—	1 10 0	0 1 9	7 11 1	57 2 10	0 6 3½	2 1 8½	2 7 7¼
Kollupitiya	1/6 & 6	100	87	24 13 3	2 18 6	27 11 9	117 12 0	36 0 0	—	—	3 6 7	—	31 9 3	188 7 10	0 5 6¼	1 12 1¾	1 17 8
Maggona	6	50	39	12 18 0	2 15 9	15 13 9	72 0 0	—	—	—	3 10 3	0 0 5	15 14 8	91 5 4	0 6 3¼	1 10 2¾	1 16 6
Maradána	6	158	128	39 1 6	—	39 1 6	124 2 6	36 0 0	—	—	0 9 10	—	49 14 2	210 6 6	0 4 11¼	1 1 8¾	1 6 8
Welikada Jail	No Fees	280	212	—	—	—	73 0 0	—	—	1 13 0	0 11 3	—	88 1 9	163 6 0	—	0 11 7¾	0 11 7¾
Ratnapura	6	53	45	11 3 9	3 12 4	14 16 1	60 0 0	18 0 0	—	—	2 6 7	1 15 7	16 13 6½	98 15 8½	0 5 7	1 11 8¼	1 17 3¼
Vernacular Schools. (Male)																	
Alubómulla	1	57	29	0 15 7	—	0 15 7	8 6 5	—	10 11 0	1 8 0	—	—	17 18 8½	38 4 1½	0 0 3½	0 13 1¼	0 13 4½
Andiambalama	1	66	55	2 13 6½	—	2 13 6½	39 0 0	—	—	—	0 6 3	0 1 3	20 15 4	60 2 10	0 0 9½	0 17 4½	0 18 2¼
Attidiya	1	40	30	1 11 6½	0 6 7	1 18 1½	30 0 0	—	—	—	0 7 9	0 1 4	12 11 9	43 0 10	0 0 11¼	1 6 6¾	1 1 6
Bandaragama	1	40	25	1 15 5½	0 17 8	2 13 1½	37 0 0	—	—	—	0 11 4	0 0 5	12 11 9	50 3 6	0 1 3¾	1 3 9¼	1 5 1
Béruwala	1	66	62	2 19 0	0 13 7	3 12 7	43 0 0	—	—	—	0 4 7	0 0 11	20 15 4	64 0 10	0 1 1¼	0 18 3½	0 19 4¾
Biyanwila	1	56	48	2 14 10	—	2 14 10	25 0 0	—	—	—	—	—	17 12 5	42 12 5	0 0 11¾	0 14 2¾	0 15 2¾
Biyagama	1	51	41	2 2 2½	—	2 2 2½	18 0 0	—	—	0 8 9	0 2 0	0 0 7	16 0 11½	34 12 3½	0 0 9¾	0 12 9	0 13 6¾

APPENDIX D.—I. *(continued.)*

NAMES.	Monthly Rate of Fees.	No. of Pupils on List.	Average Daily Attendance.	RECEIPTS. Fees.	Stationery.	Total.	CHARGES. Salaries.	Rent.	Furniture.	Books, &c.	Stationery	Sundries	Proportionate Cost of Departmental Expenses	Total.	Cost of educating each Pupil for One Year. By Receipts	Cost to Govt.	Total.
W. PROVINCE—*(contd.)* *Vernacular Schools Male (contd.)*	s. d.			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Dandugama	1	66	46	2 16 0½	—	2 16 0½	37 0 0	—	—	0 12 6	0 9 11	0 1 4	20 15 4	58 19 1	0 0 10	0 17 0	0 17 10
Dehiwala	1	31	28	1 14 10	0 7 5	2 2 3	39 0 0	—	—	0 16 4	0 1 9	0 0 5	9 15 1½	49 13 7½	0 1 4¼	1 10 8¼	1 12 0½
Godigamuwa	1	56	31	2 1 6	—	2 1 6	18 0 0	—	9 4 0	0 17 0	0 3 11	—	15 14 8	43 19 7	0 0 10	0 16 9	0 17 7
Halpita	1	84	43	2 11 11	0 0 8	2 12 7	39 10 0	—	—	0 18 6	0 3 2	0 0 11	20 2 9	60 15 4	0 0 9¾	0 18 2	0 18 11¾
Hapugahakanda	1	40	36	2 1 4	—	2 1 4	28 16 0	—	—	0 13 9	0 7 2	0 1 5	12 11 9	42 10 1	0 1 0¼	1 0 2¾	1 1 3
Hinkenda	1	104	87	4 9 10	—	4 9 10	53 16 0	—	—	1 16 6	0 12 5	0 1 9	32 14 5	88 14 7	0 0 10½	0 16 2¼	0 17 0¾
Henaratgoda	1	62	44	2 14 6	—	2 14 6	39 18 0	—	—	0 17 0	—	0 0 6	19 10 2	60 5 8	0 0 10½	0 18 6¾	0 19 5¼
Indibetta	1	52	35	2 3 10	—	2 3 10	30 0 0	—	—	—	0 5 10	0 0 5	16 17 3	47 3 6	0 0 9½	0 17 3	0 18 0½
Kandawala	1	65	45	2 17 11	—	2 17 11	43 0 0	—	—	—	—	—	20 9 0½	63 9 0½	0 0 10½	0 18 7½	0 19 6
Kandeliyaddepáluwa	1	54	41	2 7 10	—	2 7 10	27 0 0	—	—	1 10 6	0 5 2	0 1 9	16 19 10	45 17 3	0 0 10¾	0 16 1	0 16 11¾
Katána	1	124	96	5 7 4	—	5 7 4	76 16 0	—	—	—	—	—	39 0 3	115 16 3	0 0 10¼	0 17 9¾	0 18 8
Kattuwa	1	56	37	2 5 6	—	2 5 6	25 10 0	—	—	—	—	—	15 14 8	41 4 8	0 0 10¾	0 15 7	0 16 5¾
Katubedda	1	45	34	2 0 10½	—	2 0 10½	18 0 0	—	—	0 10 8	0 4 2	0 0 5	14 3 2½	32 18 5½	0 0 10¾	0 13 8¾	0 14 7½
Katukurunda	1	54	45	2 3 4	—	2 3 4	42 0 0	—	—	—	0 8 1	0 0 11	16 19 10	59 8 10	0 0 9¼	1 1 2¾	1 2 0
Kohilawatta	1	40	31	1 14 3	—	1 14 3	40 16 0	—	—	2 17 0	—	—	12 11 9	56 4 9	0 0 10¾	1 7 3	1 8 1¾
Maggona	1	144	108	6 1 7	—	6 1 7	69 13 7	—	—	—	—	0 0 5	45 6 1	115 0 1	0 0 10	0 15 1½	0 15 11½
Waráka natta (Mahara)	1	55	40	2 3 6½	—	2 3 6½	35 16 0	—	—	4 12 4	0 8 0	0 1 9	17 16 1½	58 4 2½	0 0 9½	1 0 4¾	1 1 2
Mantirimulla	1	35	31	1 10 3	—	1 10 3	25 0 0	—	—	—	0 1 6	0 0 6	11 0 3½	36 2 3½	0 0 10¼	0 19 9¼	1 0 7¾
Mattakkuli	1	145	104	5 19 4½	—	5 19 4½	58 16 0	9 0 0	—	1 8 0	0 2 1	—	45 12 4½	114 18 5½	0 0 9¾	0 15 0¼	0 15 10
Miriswatta	1	48	34	1 15 1½	—	1 15 1½	18 0 0	—	—	1 6 0	0 7 2	0 1 5	15 2 1	34 16 8	0 0 8¼	0 13 9¼	0 14 6
Pánaduré No. 1	1	47	36	2 2 5	—	2 2 5	25 0 0	—	0 17 6	—	0 4 2	0 0 11	14 15 9½	40 18 4½	0 0 10¾	0 16 6	0 17 4¾
Do. No. 2	1	53	34	1 18 4½	—	1 18 4½	39 0 0	3 0 0	—	0 10 5	0 5 0	0 0 10	16 13 6½	59 9 9½	0 0 8¾	1 1 8½	1 2 5¼
Pĕliyagoda	1	71	64	2 18 9½	0 5 0	3 3 9½	51 0 0	—	—	2 3 6	0 15 8½	—	22 6 9½	76 6 0	0 0 10¾	1 0 7	1 1 5¾
Pamunugama	1	89	61	3 2 11½	—	3 2 11½	52 16 0	—	—	0 4 0	—	—	25 3 5	78 3 5	0 0 9¾	0 18 9	0 19 6¾
Pattiwila	1	67	41	2 9 5	—	2 9 5	35 16 0	—	—	0 16 3	0 1 11	0 0 7	21 1 7½	57 16 4½	0 0 8¾	0 16 6¼	0 17 3
Payagala	1	77	63	3 12 9½	1 1 9	4 14 6½	51 0 0	—	—	—	0 11 10	0 0 5	24 4 6½	75 16 9½	0 0 11¾	0 18 8¾	0 19 8¼
Sídúwa	1	53	43	2 4 7	—	2 4 7	42 0 0	—	—	4 11 3	0 3 1	0 0 11	16 13 6½	63 8 9½	0 0 10	1 3 1¼	1 3 11¼
Slave Island	1	47	38	2 2 0	—	2 2 0	30 0 0	9 0 0	—	2 6 0	—	—	14 15 9½	56 1 9½	0 0 10¼	1 2 11¼	1 3 10
Tantirimulla	1	37	33	1 10 8	—	1 10 8	18 0 0	—	—	0 17 0	0 5 2	0 0 11	11 12 10½	30 15 11½	0 0 9¾	0 15 10	0 16 7¾
Tillandúwa	1	70	52	2 16 11	—	2 16 11	18 0 0	—	—	2 11 4	—	—	22 0 6	42 11 10	0 0 9¾	0 11 4¼	0 12 2
Udugampola	1	85	70	3 10 11	1 0 3	4 11 2	21 15 0	—	—	6 5 5	2 4 10	0 3 5	26 14 10½	57 3 6½	0 1 0¾	0 12 4½	0 13 5¼
Wádduwa	1	107	74	3 14 11	—	3 14 11	34 0 0	—	8 2 0	1 5 2	0 7 1	0 1 4	33 13 3½	77 8 10½	0 0 8¼	0 13 9½	0 14 5½
Wĕligampitiya	1	92	79	4 16 1	—	4 16 1	58 16 0	—	—	—	0 7 8	0 0 11	28 18 11	88 3 6	0 1 0½	0 18 1½	0 19 2
Warágoda	1	54	44	2 9 2½	—	2 9 2½	40 16 0	—	—	0 8 0	0 3 10	0 0 6	16 19 10	58 8 2	0 0 10¾	1 0 8¾	1 1 7½
Waskaduwa	1	26	26	1 7 8½	—	1 7 8½	18 0 0	—	—	—	—	—	8 3 8	26 3 8	0 1 0½	0 19 0½	1 0 1¼

Wattala	1	66	40	2	15	2	1	12	6	4	7	8	39	0	0	—			—			1	9	3¾	0	0	4	20	15	4	61	4	11¾	0	1	3¾	0	17	2¾	0	18	6½
Watugoda	1	39	29	1	12	2	0	16	8	2	8	10	27	0	0	—			—			0	6	0	0	1	4	12	5	5½	39	12	9½	0	1	3	0	19	0¾	1	0	3¾
Wewitta	1	41	27	1	13	1½		—		1	13	1½	34	0	0	—			—	1	17	6	0	13	0	0	1	4	12	18	0½	49	9	10½	0	0	9¾	1	3	4	1	4	1¼
English Schools (Female.)																																										
Colombo Girls' School	1/3	92	89	62	17	0		—		62	17	0	404	10	0	60	0	0	—			—			0	12	10	2	6	1	28	18	11	496	7	10	0	13	7¾	4	14	3	5	7	10¾
Female Seminary	1/6	92	98	71	15	7		—		71	15	7	390	10	0		—			4	14	0		—			—			3	2	0	28	18	11	427	4	11	0	15	7¼	3	17	3¼	4	12	10½
Anglo-Vernacular Schools. (Female.)																																										
Borella	No Fees	24	22		—			—			—		18	0	0	18	0	0	—			—			0	9	11	0	15	0	7	11	1	44	16	0		—		1	17	4	1	17	4
Kalutara	6	21	24	4	12	0		—		4	12	0	50	0	0		—		—			—			0	6	6	0	15	5	6	12	2½	57	14	1½	0	4	4¾	2	10	6¾	2	14	11½
Negombo	6	30	24	6	17	9		—		6	17	9	36	0	0	24	0	0	—			—			0	6	6	0	15	0	9	8	9	70	10	3	0	4	7	2	2	5	2	7	0
Vernacular Schools. (Female)																																										
Attidiya	No Fees	28	21		—			—			—		12	0	0		—		—			—			0	1	2	0	0	6	8	16	2	20	17	10		—		0	14	11	0	14	11
Bandáragama	do.	22	14		—			—			—		12	0	0		—		—			—			0	1	7	0	0	5	6	18	5	19	0	5		—		0	17	3½	0	17	3½
Gelanigama	do.	38	26		—		0	4	0	0	4	0	12	0	0		—		—	0	11	0	0	6	7	0	1	4	11	19	1	24	18	0	0	0	1¼	0	13	0	0	13	1¼
Indibetta	do.	43	33		—			—			—		47	16	0		—		—			—			0	4	11	0	0	11	13	10	6½	61	12	4½		—		1	8	7½	1	8	7½
Maggona	do.	49	30		—			—			—		21	0	0		—		—			—				—			—		15	8	3½	36	8	3½		—		0	14	7¾	0	14	7¾
Pánadurê No. 1	do	30	21		—			—			—		12	0	0		—		—			—			0	2	8	0	0	11	9	8	9	21	12	4		—		0	14	3¾	0	14	3¾
Do. No. 2	do.	50	35		—			—			—		12	0	0	3	0	0	—			—			0	4	2	0	0	10	15	14	7	30	19	7		—		0	12	4½	0	12	4½
Pamunugama	do.	37	28		—			—			—		12	0	0		—		—			—				—			—		11	12	9½	23	19	5½		—		0	12	11½	0	12	11½
Pélivagoda	do	94	64		—			—			—		12	0	0		—		—	17	8	9		—		0	9	10	0	0	5	29	11	5	59	10	5		—		0	12	7¾	0	12	7¾
Weligampitiya	do.	35	27		—			—			—		12	0	0		—		—			—			0	5	8	0	0	11	11	0	2½	23	6	9½		—		0	13	4	0	13	4
Wesastera Kalutara	do.	73	57		—			—			—		8	0	0		—		16	2	3	1	8	6		—			—		22	19	3½	48	10	0½		—		0	13	3¼	0	13	3¼
N.-W. Province		1932	1955	750	5	10½	23	17	4	774	3	2½	4636	3	6	399	0	0	85	14	11	52	18	11	38	13	9½	11	17	1	1552	5	10	6776	14	0¼	11	0	10	94	13	4¼	105	14	2¼
English School. (Male.)																																										
Kurunégala	1/6 & 6	47	36	15	9	9	1	13	9	17	3	6	163	0	0		—		1	4	0		—		2	2	10	0	3	3	14	3	2½	180	13	3½	0	7	7¾	3	12	7¾	4	0	3½
Anglo-Vernacular Schools. (Male)																																										
Malampe	6	24	22	5	6	9	0	1	8	5	8	5	48	0	0	8	12	6	—			1	18	6	0	8	8	0	17	6	7	11	1	67	8	3	0	4	6¼	2	11	7¾	2	16	2
Puttalam	6	37	26	8	10	9	0	8	8	8	19	5	63	0	0		—		—			—				—			—		11	12	10½	74	12	10½	0	4	10¼	0	15	5¾	1	0	4
English School. (Female.)																																										
Kurunégala	1/6	22	16	17	15	9	0	6	4	18	2	1	171	0	0		—		—			—			2	0	0	6	18	6	179	18	6	0	16	5½	7	7	1¼	8	3	6¾
Southern Province		128	100	47	3	0	2	10	5	49	13	5	445	0	0	8	12	6	1	4	0	1	18	6	2	11	6	3	0	9	40	5	8	502	12	11	1	13	5¾	14	6	10½	16	0	4½
English School. (Male.)																																										
Galle Central	5 to 1/6	101	109	168	18	3	4	3	10	173	2	1	528	10	0	100	0	0	—			—			7	13	11	0	7	2	31	15	6¾	668	5	7½	1	14	3¼	4	18	0½	6	12	3¾
Do. Lower School	6	236	194	58	18	9	14	16	10	73	15	7	212	10	0	60	0	0	—			—			15	17	10	0	7	2	74	4	11	362	19	11	0	6	3	1	4	6	1	10	9
Mátara	1 6	77	50	60	0	0	1	8	2	61	8	2	187	0	0		—		—			0	9	2	0	3	9	0	1	5	24	4	5½	211	18	9½	0	15	11½	1	19	1	2	15	0½
Anglo Vernacular Schools. (Male.)																																										
Bentota	6	77	66	17	0	9	3	0	8	20	1	5	75	0	0		—		—			1	8	6	3	8	2	0	5	1	24	4	6½	104	6	3½	0	5	2½	1	1	10½	1	7	1
Dodanduwa	6	23	18	5	13	9	2	4	2	7	17	11	48	0	0	6	10	0	—			—			2	7	9	0	2	9	7	4	9½	64	5	3½	0	6	10½	2	9	0¼	2	15	10½

NAMES.	Monthly Rate of Fees.	No. of Pupils on List.	Average Daily Attendance.	RECEIPTS. Fees.	Stationery.	Total.	CHARGES. Salaries.	Rent.	Furniture.	Books, &c.	Stationery.	Sundries.	Proportionate Cost of Departmental Expenses.	Total.	Cost of educating each Pupil for One Year. By Receipts.	Cost to Government.	Total.
	s. d. s. d.			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d	£ s. d.	£ s. d.	£ s. d.	£ s. d.
S. PROVINCE. *(contd.)*																	
Anglo-Vernacular Schools. (Male.)—(contd.)																	
Hambantota	6	34	29	9 15 9	3 9 3	13 15 0	60 0 0	18 0 0	—	—	3 12 8	0 2 11	10 14 0	92 9 7	0 7 9½	2 6 7½	2 14 4¾
Kaluwella	6	84	64	20 4 0	4 14 2	24 18 2	84 0 0	18 0 0	—	0 4 10	5 7 8	0 3 7	23 8 7	134 4 8	0 5 11¼	1 6 0¼	1 11 11½
Weligama	6	30	25	0 7 5	2 7 9	9 12 9	51 0 0	6 0 0	—	—	2 15 5	0 4 7	9 8 10	69 8 10	0 6 5½	2 0 2½	2 6 7½
Vernacular Schools. (Male.)																	
Dikwella	1	24	19	1 1 4	—	1 1 4	25 0 0	—	—	—	—	—	7 11 1	32 11 1	0 0 10¾	1 6 2¾	1 7 1½
Godapitiya	1	29	23	1 3 8	0 8 7	1 12 3	25 0 0	—	—	—	1 7 9	0 5 10	9 2 6½	35 16 1½	0 1 1½	1 3 6¾	1 4 8¼
Ranchagoda (Hakmana)	1	28	18	0 18 3	0 8 3	1 6 6	25 0 0	—	—	—	1 8 8	0 3 10	8 16 3	35 8 9	0 0 11¼	1 4 4½	1 5 3¾
Madihe	1	35	28	1 10 4	—	1 10 4	25 0 0	—	—	—	—	—	11 0 3½	36 0 3½	0 0 10½	0 19 8½	1 0 6¾
Udawaka	1	14	15	0 17 11	—	0 17 11	25 0 0	—	—	—	—	—	4 8 2	29 8 2	0 1 3½	2 0 8¾	2 2 0
English School. (Female.)																	
Galle	1 6	55	40	30 1 6	1 5 10	31 7 4	360 10 0	45 0 0	—	—	1 14 6	0 2 10	17 6 1½	424 13 5½	0 11 4¾	7 3 0¼	7 14 5
Anglo-Vernacular School. (Female.)																	
Hambantota	6	5	7	3 9 3	—	3 9 3	36 0 0	—	—	—	—	0 2 5	1 11 5½	37 13 10½	0 13 10½	6 16 11	7 10 9¼
Matara	6	53	39	11 13 9	0 12 11	12 6 8	99 0 0	36 0 0	—	0 4 2	0 3 5	1 1 5	16 13 5½	153 2 5½	0 4 7¾	2 13 1½	2 17 9¼
Vernacular School. (Female.)																	
Paramulla	No Fees	30	13	—	0 10 0	0 10 0	12 0 0	—	—	—	0 15 2	0 3 10	9 8 9	22 7 9	0 0 4	0 14 7	0 14 11
		935	757	398 12 3	39 10 5	438 2 8	1878 10 0	289 10 0	—	2 6 8	46 15 8	3 14 10	294 3 9½	2515 0 11½	6 4 0¼	41 7 7	47 11 7½
EASTERN PROVINCE.																	
Anglo-Vernacular School. (Male.)																	
Trincomalee	6 & 3	46	42	11 8 1½	0 14 9	12 12 10½	73 0 0	—	—	—	0 17 2	1 18 6	14 9 6	90 5 2	0 5 5¾	1 13 8¾	1 19 2½
Vernacular School. (Female.)																	
Trincomalee (Tamil)	1	39	31	1 12 9	—	1 12 9	40 0 0	9 12 0	1 16 0	—	—	2 5 6	12 5 4½	65 8 10½	0 0 10¼	1 12 11¼	1 13 9¾
		85	73	13 10 10½	0 14 9	14 5 7½	113 0 0	9 12 0	1 16 0	—	0 17 2	4 4 0	26 14 10½	156 4 0½	0 6 4	3 6 8¼	3 13 0¼
NORTHERN PROVINCE.																	
Anglo-Vernacular Schools. (Male.)																	
Mullaittivu	6 & 1	25	24	3 3 0	0 5 0	3 8 0	36 0 0	—	—	—	—	2 0 4	7 17 4½	45 17 8½	0 2 8¾	1 13 11¼	1 16 8½

Mannár	6	1	12	12	2	10	2	2	3	5	4	13	7	60	0	0	12	0	0	—		—		1	14	1	0	5	0	3	15	7	77	14	8	0	7	9½	6	1	9	6	9	6½
English School. (Female.)																																													
Jaffna	1/6		26	24	9	16	0	0	1	0	9	17	0	227	0	0	32	0	0	—	0	10	0	0	5	2	3	8	0	8	3	8	271	6	10	0	7	6½	10	1	1½	10	3	8½
			63	60	15	9	2	2	9	5	17	18	7	323	0	0	44	0	0	—	0	10	0	1	19	3	5	13	4	19	16	7½	394	19	2½	0	18	1	17	16	10½	18	14	11½
CENTRAL PROVINCE.																																												
English School. (Male.)	7s. 6d. to																																											
Kandy, Central	1s.		130	113	243	0	3	9	7	7	252	7	10	692	10	0	—			—		—		11	14	1	2	19	9	40	18	0	748	1	10	1	18	9½	3	16	3½	5	15	1
Anglo-Vernacular Schools. (Male.)																																												
Badulla	6		40	36	11	1	9	0	13	4	11	15	1	124	10	0	30	0	0	—		—		0	18	8¾	0	4	1	12	11	9	168	4	6¾	0	5	10½	3	18	2¾	4	4	1¼
Gampola	6		45	41	11	11	3		—		11	11	3	84	0	0	—			—		—		0	4	1	0	1	0	14	3	2½	98	8	3½	0	5	1½	1	18	7½	2	3	8
Kadugannáwa	6		34	22	6	12	6	0	13	2	7	5	8	48	0	0	6	0	0	—	0	2	10	0	10	4	0	1	0	10	14	0	65	8	2	0	4	3½	1	14	2½	1	18	5½
Kandy	1/6 &	6	118	111	56	18	6		—		56	18	6	144	0	0	—			—		—			—		0	6	2	37	2	6	181	8	8	0	9	7½	1	1	1½	1	10	9
Madawelatenna	6		35	28	8	16	3	0	3	0	8	19	3	48	0	0	—			—		—			—		—			11	0	3½	59	0	3½	0	5	1½	1	8	7½	1	13	8½
Mátalé	6		60	40	13	4	6	1	15	4	14	19	10	75	0	0	25	0	0	5	18	0	—	1	18	3	0	5	5	18	17	7	126	19	3	0	4	11½	1	17	4	2	2	3½
Nuwara Eliya	6		20	17	4	2	9	0	10	1	4	12	10	60	0	0	—			—		—		1	12	0	0	4	0	6	5	11	68	1	11	0	4	7½	3	3	5½	3	8	1
Weligalla (Udunuwara)	6		31	20	4	5	9		—		4	5	9	42	1	3	6	0	0	—		—		1	0	11	0	15	6	9	15	1½	59	12	9½	0	2	9	1	15	8½	1	18	5½
Udatenna	6		17	12	2	18	9	0	17	0	3	15	9	44	0	0	—			—	0	5	10	0	18	6	0	4	6	5	7	0½	50	15	10½	0	4	5½	2	15	3½	2	19	9
Walala	6		31	18	6	4	0	1	11	2	7	15	2	48	0	0	—			—	2	3	10	1	17	7	0	4	11	9	15	1½	62	1	5½	0	5	0	1	15	0½	2	0	0½
Náwalapitiya *	—		—	—		—			—			—		2	3	10	—			—		—			—			—			—		2	3	10		—			—			—	
Vernacular School. (Male.)																																												
Mátalé (Tamil)	1		20	18	0	16	9	0	9	0	1	5	0	36	0	0	12	0	0	—		—		0	13	0	0	3	0	6	5	11	55	1	11	0	1	3½	2	13	9½	2	15	1
Maturata †	—		—	—		—		0	10	11	0	10	11	11	0	0	—			—		—		1	7	5	0	7	0		—		12	14	5		—			—			—	
English School. (Female.)																																												
Kandy	1/6		52	41	39	1	6	1	3	6	40	5	0	332	0	0	—			—		—		1	16	5	2	7	1	16	7	3	352	10	9	0	15	5½	6	0	1½	6	15	7
Anglo-Vernacular Schools. (Female.)																																												
Badulla	6		14	9	3	6	3	0	3	4	3	9	7	50	0	0	18	0	0	—		—		0	6	7	0	4	0	4	8	2	72	18	9	0	4	11½	4	19	2¾	5	4	2½
Gampola	6		25	14	6	1	0		—		6	1	0	63	0	0	—			—		—		0	4	6	1	0	0	7	17	4½	72	1	10½	0	4	10	2	12	10	2	17	8
Mátalé	6		23	13	3	12	0		—		3	12	0	33	6	8	—			—		—			—		0	4	4	7	4	8½	40	15	8½	0	3	1½	1	12	4	1	15	5½
			695	553	421	13	9	17	17	5	439	11	2	1937	11	9	97	0	0	5	18	0	2	12	6	25	2	4¾	9	11	9	218	13	11½	2296	10	4½	6	0	3¾	43	2	1¾	49	2	5½

* Closed in June, 1869.

† Closed in March, 1869.

APPENDIX D.—II.

ABSTRACT of RECEIPTS, COST, and STATE of GOVERNMENT SCHOOLS in the several Provinces, during the Year 1869.

PROVINCES.	Number of Schools	No. of Pupils on List.	Average Daily Attendance	RECEIPTS. Fees.			Stationery			Total			CHARGES. Salaries.			Rent			Furniture			Books, &c.			Stationery			Sundries			Proportionate Cost of Departmental Expenses			Total.			Cost of educating each Pupil for One Year. By Receipts			Cost to Government.			Total.		
				£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Western ...	78	5250	42 8	1372	10	7½	23	17	4	1396	7	11½	7057	2	6	399	0	6	91	8	11	52	18	11	42	5	1¼	11	17	1	1652	6	9	9306	19	3¼	0	6	0¾	1	9	4½	1	15	5¼
North-Western	4	158	100	47	3	0	2	10	5	49	13	5	445	0	0	8	12	6	1	4	0	1	18	6	2	11	6	3	0	9	40	5	8	502	12	1	0	7	9	3	10	9¼	3	18	6¼
Southern.....	17	935	757	398	12	3	39	10	5	438	2	8	1878	10	0	289	10	6	—			2	6	8	40	15	8	3	14	10	294	3	9½	2515	0	11¼	0	9	4¼	2	4	5¼	2	13	9½
Eastern	2	85	73	13	10	10½	0	14	9	14	5	7½	113	0	0	9	12	0	1	16	0	—			0	17	2	4	4	0	* 26	14	10½	176	4	0½	0	3	4½	1	13	4½	1	16	9
Northern	3	63	60	15	9	2	2	9	5	17	18	7	323	0	0	44	0	0	—			0	10	0	1	19	3	5	13	4	19	16	7½	394	19	2½	0	5	8¼	5	19	8¼	6	5	4½
Central	16	695	553	421	13	9	17	17	5	439	11	2	1937	11	9	97	0	0	5	18	0	2	12	6	25	2	4¾	9	11	9	218	13	11½	2296	10	4¼	0	12	7¾	2	13	5¼	3	6	1
Total...	120	7156	5781	2468	19	8	86	19	9	2555	19	5	11754	4	3	847	14	6	100	6	11	60	6	7	119	11	1	38	1	9	2252	1	8	15172	6	9	0	7	1½	1	15	3¼	2	2	4¾

* Exclusive of the Maturata Vernacular School closed in March, and the Nawalapitiya Anglo-Vernacular Boys' School closed in June.

APPENDIX D.—III.

ABSTRACT of RECEIPTS, COST, and STATE of the Several Classes of GOVERNMENT SCHOOLS, during the Year 1869.

SCHOOLS.	No. of Schools.	No. of Pupils on List.	Average Daily Attendance.	RECEIPTS. Fees.			Stationery.			Total.			CHARGES. Salaries			Rent.			Furniture			Books, &c.			Stationery.			Sundries.			Proportionate Cost of Departmental Expenses.			Total.			Cost of educating each Pupil for One Year. By Receipts.			Cost to Government.			Total.		
				£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Boys'.																																												
English	12	1456	1315	1737	11	8	35	11	2	1773	2	10	5500	9	0	334	0	0	6	18	0	5	1	11	48	17	9	4	0	3	451	15	11	6351	2	10	1	4	8¼	3	3	9	4	8	5¼
Anglo-Vernacular.....	30	1652	1342	333	16	7	38	2	10	371	19	5	1983	9	7	235	2	6	24	13	5	8	2	2	43	7	6¾	10	10	6	519	16	2	2825	1	10¾	0	4	6	1	9	8¼	1	14	2¼
Vernacular	51	2966	2261	124	19	4	8	18	10	133	18	2	1774	13	0	33	0	0	28	14	6	44	2	2	18	7	8¼	2	11	10	933	15	4	2835	4	6¼	0	0	10¾	0	18	2½	0	19	1¼
Total, Boys'...	93	6054	4918	2196	7	7	82	12	10	2279	0	5	9258	11	7	602	2	6	60	5	11	57	6	3	110	13	0	17	2	7	1905	7	5	12011	9	3	0	7	6¼	1	12	1¾	1	19	8
Girls'.																																											
English	6	339	308	231	7	4	2	16	8	234	4	0	1885	10	0	137	0	0	4	14	0	0	10	0	4	8	11	13	6	0	106	13	4½	2152	2	3½	0	13	9¾	5	13	1¾	6	6	11½
Anglo-Vernacular	8	195	152	39	12	0	0	16	3	40	8	3	385	6	8	96	0	0	—			0	4	2	1	17	5	4	17	7	61	7	2½	549	13	0½	0	4	1¾	2	12	2¾	2	16	4¼
Vernacular ...	13	568	400	1	12	9	0	14	0	2	6	9	224	16	0	12	12	0	35	7	0	2	6	2	2	11	9	2	15	7	178	13	8	459	2	2	0	0	0¾	0	16	1	0	15	1¾
Total, Girls'...	27	1102	860	272	12	1	4	6	11	276	19	0	2495	12	8	245	12	0	40	1	0	3	0	4	8	18	1	20	19	2	346	14	3	3160	17	6	0	5	0¼	2	12	4	2	17	4¼
TOTAL...	120	7156	5778	2468	19	8	86	19	9	2555	19	5	11754	4	3	847	14	6	100	6	11	60	6	7	119	11	1	39	1	9	2252	1	8	15172	6	9	0	7	1½	1	15	3¼	2	2	4¾

APPENDIX D.—IV.

NOMINAL RETURN of TEACHERS employed in the GOVERNMENT SCHOOLS.

SCHOOLS.	TEACHERS.		Yearly Salary. £	s.	d.
English Schools.					
Colombo Academy.	Principal	Rev. B. Bonke, D. D.	750	0	0
	1st do. Asst.	J. H. Marsh, Esq.	400	0	0
	2nd do. do	G. Steward, Esq., M. A.	400	0	0
	5th Form Master	Mr M Pereira	150	0	0
	4th do. do.	(Vacant)	100	0	0
	3rd do. do.	Mr F. Donhorst	90	0	0
	2nd do. do.	Mr. J. Jansz	84	0	0
	1st do do.	Mr C. Heyzer	72	0	0
Normal Institution.	English Master	J. Hill, Esq	300	0	0
	Vernacular Master	Mr. J. Garth	200	0	0
Galle Central School.	Head Master	J. E. Anthonisz, Esq.	250	0	0
	1st Asst. do.	Mr. W. Auwardt	100	0	0
	2nd Asst. do.	Mr. F. E. de Zilva	72	0	0
	3rd Asst do.	Mr. H. Paranavitane	48	0	0
	4th Asst. do.	Mr. J. Goonewardene	36	0	0
Do. Lower School ...	Head Master	Mr. J. R. Anthonisz	125	0	0
	1st Asst do.	Mr. Stephen Jansz	48	0	0
	2nd Asst. do.	Mr. Gabriel de Silva	36	0	0
	3rd Asst do	Mr. C. Sameresinghe	24	0	0
Kandy Central School.	Head Master	W. F Van Cuylenberg, Esq.	240	0	0
	1st Asst. do.	Mr. R. P. Jansz	150	0	0
	2nd Asst. do.	Mr. H. de S. Wijeyesekera	80	0	0
	3rd Asst. do.	Mr. N. Brohier	75	0	0
	Supernumerary	Mr. N. de Silva	36	0	0
St. Thomas'	Head Master	Mr. E Ludekens	120	0	0
	1st Asst. do.	Mr F. Perera	60	0	0
	2nd do.	Mr. L. Direckze	48	0	0
Colombo (Boys')	Head Master	Mr. J. W. Spaar	120	0	0
	1st Asst. do.	Mr. B. A Senanayeke	60	0	0
	2nd do.	Mr. C. Perera	48	0	0
Borella	Head Master	Mr. J. Pereira	120	0	0
	1st Asst. do.	Mr. J. Thiedeman	72	0	0
	2nd Asst. do.	Mr. G. Corea	60	0	0
Grandpass	Head Master	D S. Perera, Mohandiram	100	0	0
	1st Asst. do	Mr. J. Candappa	48	0	0
	2nd Asst. do.	Mr. J W Perera	36	0	0
Negombo	Head Master	Mr. H. D Jayesinghe	100	0	0
	1st Asst. do.	Mr. G Pereira	48	0	0
	2nd Asst. do.	(Vacant)	36	0	0
Pánaduré	Head Master	Mr. A Parys	120	0	0
	1st Asst. do.	Mr. Simon de Silva	60	0	0
	2nd Asst. do.	Mr C. D S W. Goonetilleke	48	0	0
	3rd Asst. do.	Mr C. Pieris	36	0	0
Kalutara	Head Master	Mr. F. Grenier	120	0	0
	1st Asst. do.	Mr. D. C. Abeysekera	60	0	0
	2nd Asst. do.	Mr W. C. Meynert	48	0	0
Kurunégala	Master	Mr. Charles de Silva	100	0	0
Mátara	Head Master	Mr. R H Leembruggen	100	0	0
	1st Asst. do.	Mr R. Ludekens	48	0	0
	2nd Asst. do.	Mr. C. P. Seneweratne	36	0	0
nglo-Vernacular Schools.					
Maradána	Head Master	Mr. Amaris de Zoysa	60	0	0
	1st Asst. do.	Mr. D. F. J. Jayewardena	36	0	0
	2nd Asst. do.	Mr. W. B Fernando	24	0	0
Kollupitiya	Head Master	Mr. H. Pereira	60	0	0
	Asst. do.	Mr B. Pereira	36	0	0
	Monitor	Mr. W. C. Bastiansz	6	0	0
Milágriya	Head Master	Mr D. W. Abeyesinghe	48	0	0
	1st Asst. do.	Mr. T. Perera	36	0	0
	2nd Asst. do.	Mr. J. Perera	24	0	0
Kandána	Head Master	Mr. J E de Hoedt	48	0	0
	Asst do.	Mr J. Mendis	24	0	0
Kégalla	Head Master	Mr. F. J Wiraratne	48	0	0
Ratnapura	Head Master	Mr. D H. Dissanayeke	60	0	0
	Pupil Teacher	Mr. F R. Van Hagt	6	0	0
	Do.	Mr. J H Wickremesekere	6	0	0
Maggona	Head Master	Mr. A. de S. Abeyenaike	60	0	0
	Asst. do.	Mr D. Wijeyemane	36	0	0
Bentota	Head Master	Mr. A. Wittachy	60	0	0
	Asst. do.	Mr. Daniel Alwis	36	0	0
Dodanduwa	Master	Mr J. de Alwis	48	0	0
Kaluwella	Head Master	Mr. D. A. Goonesekere	60	0	0
	Asst. do.	Mr. C. Sameresinghe	36	0	0
Weligama	Master	A. de Silva, Mohandiram	60	0	0

PUBLIC INSTRUCTION.

Appendix D.—IV.

Schools.	Teachers.		Yearly Salary. £	s.	d.
Anglo-Vernacular Schools.—(contd.)					
Hambantoṭa	Master	Mr C. A. Perera	60	0	0
Kandy	Head Master	Mr. N. D. S. Gooneratne	90	0	0
	1st Asst. do.	Mr. P. Sirimane	60	0	0
	2nd Asst. do.	Mr. S. C. Buksh	48	0	0
Maḍawalatęnna	Master	Mr. D. A. Gunasekera	48	0	0
Gampola	Head Master	Mr. W. D S. Wickremesckera	60	0	0
	1st Monitor	Mr. Philip de Silva	6	0	0
	2nd do.	Mr. H. de Silva	6	0	0
Kaḍugannáwa	Master	Mr. D. Perera	48	0	0
Mátalé	Head Master	Mr. W. Tillekeratne	60	0	0
	1st Monitor	Mr. K. Kadarival	6	0	0
	2nd do.	Mr. D. A. Wickremesckera	6	0	0
Nuwara Eliya	Master	Mr. N. Mendis	66	0	0
Badulla	Head Master	Mr. A. Van Cuylenberg	90	0	0
	Monitor	(Vacant)	12	0	0
Uḍaṭęnna	Master	Mr. P. E. Murgappah	48	0	0
Weligalla	Do.	Mr. D. J. Wanigasekera	48	0	0
Walala	Do.	Mr. L. De Silva	48	0	0
Mádampé	Do.	Mr. W. Wijesinghe	60	0	0
Puttalam	Do.	Mr. J. B. Dherlirkhan	60	0	0
Mullaittívu	Do.	Mr. T. Fry	60	0	0
Vernacular Boys' Schools.					
Slave Island	Head Master	B. De Alvis	24	0	0
	Monitor	(Vacant)	3	0	0
Attidiya	Master	S. Fernando	30	0	0
Mantirimulla	Do.	S. Fonseka	30	0	0
Indibeṭṭa	Do.	J. Fernando	30	0	0
Bandáragama	Do.	Don Alexander	18	0	0
Pánaduré, No. 1.	Do	A. Fernando	30	0	0
Pánaduré, No. 2.	Head Master	D. C. Jayetoonge	30	0	0
Welikaḍa Jail	1st Master	Mr. Amaris de Zoysa	24	0	0
	2nd do	Mr. A. Perera	24	0	0
	3rd do.	Mr. J. Thiedeman	24	0	0
Hulfsdorp Jail	Master	Mr. S. L. Fonseka	24	0	0
Póhaddaramulla	Do.	A. P. de Silva	21	0	0
Payyágala	Head Master	S. Fernando	30	0	0
	Asst. do.	W. C. J. Dias	12	0	0
Maggona	Head Master	Isaac Pieris	39	0	0
	1st Asst. do.	H. Fernando	18	0	0
	2nd Asst. do.	M. Perera	12	0	0
Béruwala	Head Master	Don A de Alwis	30	0	0
	Asst do.	Don Jeronis	12	0	0
Kaṭukurunda	Head Master	C. Peiris	30	0	0
	Asst. do.	Carolis Perera	12	0	0
Pęliyagoda	Head Master	Don Matthis	33	0	0
	Asst. do.	Carolis Dabera	9	0	0
	Monitor	V. de Silva	3	0	0
Warágoda	Head Master	S. Gomis	30	0	0
	Asst. do.	Adrian Perera	10	16	0
Warákanatta	Head Master	Carolis Dias	30	0	0
	Asst. do.	P. Perera	10	16	0
Henaratgoda	Head Master	Don Bastian	18	0	0
	Asst. do.	Don Seelis	10	16	0
Wattala	Head Master	A Rodrigue	33	0	0
	Asst. do.	Juan Swaris	9	0	0
Węligampiṭiya	Head Master	Don Johannis	33	0	0
	Asst do.	D. B. Jayawardene	18	0	0
	1st Monitor	(Vacant)	3	0	0
	2nd Monitor	(Vacant)	3	0	0
Daṇḍugama	Head Master	Ablino Coorey	25	0	0
	Asst. do.	S. Perera	12	0	0
Síḍúwa	Head Master	P. de Silva	33	0	0
	Asst. do.	Don Cornelis	9	0	0
Kaṭána	Head Master	B. Rodrigo	24	0	0
	1st Asst. do.	Manuel Silva	15	0	0
	2nd Asst. do.	Don Banis	12	0	0
	Monitor	Don Gabriel	3	0	0
Aṇḍiambalama	Head Master	J. de Silva	33	0	0
	Asst. do.	Charles Perera	9	0	0
Kohilawatta	Head Master	B. Perera	25	0	0
	Asst. do.	(Vacant)	10	16	0
Paṭṭiwila	Head Master	Don Jeronimus	30	0	0
	Asst. do.	Robert Perera	10	16	0
Maṭṭakkuli	Head Master	Don Joseph	36	0	0
	1st Asst. do.	J. Dias	12	0	0
	2nd Asst. do.	A. D. S. Wijeyesinghe	9	0	0
Pamunugama	Head Master	C. Narayane	30	0	0
	1st Asst. do.	J. P. Rodrigue	12	0	0
	2nd Asst. do.	Don Anthony	10	16	0

Schools.	Teachers.		Yearly Salary. £ s. d.
Vernacular Boys' Schools.—(contd.)			
Mahawatta	Head Master	J. Dias	30 0 0
	Asst. do.	Don Anthonisz	10 16 0
Biyagwila	Head Master	J. N. Caldera	28 0 0
	Asst. do.	H. S. Gunasekere	10 16 0
Hinkenda	Head Master	Don Gregoris	28 0 0
	1st Asst. do.	Pauloe Perera	12 0 0
	2nd Asst. do.	(Vacant)	9 0 0
Wewita	Head Master	D. L. Kannangere	18 0 0
Kandawala	Head Master	Don Jusay	18 0 0
	Asst. do.	Don Gabriel	12 0 0
Hapugahakanda	Head Master	D. Coorey	21 0 0
	Asst. do.	(Vacant)	10 16 0
Watugoḍa	Head Master	Francis Peris	21 0 0
	Asst. do.	R. Perera	9 0 0
Wâdduwa	Head Master	Floris Peris	25 0 0
	Asst. do.	A. Andradie	9 0 0
Biyagama	Head Master	D. Francisco	18 0 0
	Asst. do	(Vacant)	10 16 0
Kaṭṭuwa	Head Master	Martino Peris	18 0 0
	Monitor	(Vacant)	3 0 0
Tantirimulla	Master	D. D. Goonesekere	21 0 0
Kandeliaddepáluwa	Head Master	Gregoris Perera	18 0 0
	Asst. do.	Don Paulus	9 0 0
Alubomulla	Master	J. H. Rodrigue	18 0 0
Miriswatta	Master	Savery Perera	21 0 0
Halpiṭa	Head Master	J. Dias	30 0 0
	Asst. do.	D. Christian	12 0 0
Tillanduwa	Master	Don Cornelis	18 0 0
Goḍagamuwa	Master	Don Abraham	21 0 0
Kaṭubedde	Master	B Mendis	18 0 0
Uḍagampola	Head Master	D. Abraham	24 0 0
	Monitor	D. Perera	3 0 0
	Monitor	Don David	3 0 0
Practising School, N. I.	Master	Don Cornelis	36 0 0
Kirillawela	Master	Don Poloris	18 0 0
Imbulgoḍa	Master	C. Cabral	18 0 0
Ratnapura	Master	Hendrick Silva	24 0 0
Hanwella	Master	Jacovis Fernando	24 0 0
Goḍapitiya	Master	L. P. Gerhard	25 0 0
Ranchágoḍa	Master	J. D. S Abeyegunewardena	25 0 0
Dikwella	Master	H. D. Gooneratne	25 0 0
Morowaka	Master	C. D. S. Abeywardena	25 0 0
Madiha	Master	S. Suriarachy	25 0 0
Mâtalé (Tamil)	Master	V. Kadaramar	36 0 0
Trincomalee (do.)	Head Master	N. Tambyah	24 0 0
	Asst. do.	C. C. C. Chedi	18 0 0
Koḍḍiyár (do.)	Master	S. Appachipulle	36 0 0
Kiniyai (do.)	Master	V. Tilliampalam	24 0 0
Female English Schools:—			
Colombo Female Seminary	Principal	Mrs. C. Gray	300 0 0
	1st Asst.	Mrs. E. Lourensz	48 0 0
	2nd Asst.	Mrs. E. Thomas	36 0 0
	1st Pupil Teacher	Miss A. Lourensz	6 0 0
	2nd do.	Miss C. De Silva	6 0 0
Colombo Girls' School	Principal	Miss E. Paltridge	250 0 0
	1st Asst.	Mrs. M de Kretzer	48 0 0
	2nd Asst.	Mrs. M. Anjou	36 0 0
	3rd Asst.	Mrs. E. Jansz	30 0 0
	Needle-work Mistress	Mrs. M. Koolmeyer	36 0 0
Kandy Girls' School	Principal	Mrs. H. L. Thompson	300 0 0
	Assistant	Mrs. T. Felsinger	120 0 0
Galle Girls' School	Principal	Miss E. A. Lloyd	250 0 0
	Assistant	Miss M. L. Lloyd	60 0 0
	1st Monitor	Miss Alice Grace	6 0 0
	2nd Monitor	Miss M. A. Brohier	6 0 0
Jaffna Girls' School	Principal	Miss H. Towell	200 0 0
	Asst.	Mrs. J. Maartensz	24 0 0
Female Anglo-Vernacular Schools.			
Negombo	Mistress	Mrs. C. Leembruggen	48 0 0
Kalutara	Do.	Mrs. M. A. Grenier	50 0 0
Mâtara	Do.	Mrs. H. Leembruggen	50 0 0
	Monitor	Miss J. Altendorff	6 0 0
Badulla	Mistress	Miss A. VanCuylenberg	50 0 0
Gampola	Do.	Mrs. C. Burleigh	60 0 0
Mâtalé	Do.	Mrs. L. Goonewardene	36 0 0
Kurunégala	Do.	(Vacant)	50 0 0

PUBLIC INSTRUCTION.

Appendix D.—IV.

Schools.	Teachers.		Yearly Salary.		
			£	s.	d.
Female Vernacular Schools.—(contd.)					
Indibeṭṭa	Mistress	Mrs. E. De Mell	12	0	0
	Male Asst.	J. Fernando	10	16	0
Bandáragama	Mistress	Dona Cornelia	12	0	0
Dessastera Kalutara	Do.	Miss E. M. Wijeyamanne	12	0	0
	Male Asst.	Don A. Wijeyamanne	9	0	0
Attidiya	Mistress	Dona Maria	12	0	0
Weligampitiya	Do.	Dona Maria	12	0	0
Pánaduré, No. 1	Do.	A. Goonewardene	12	0	0
Pánaduré, No. 2	Do.	Mrs. Johanna Perera	12	0	0
Maggona	Do.	Mrs. C. Rodrigo	12	0	0
	Male Asst.	D. P. Silva	9	0	0
Galanegama	Mistress	Dona Sophia	12	0	0
Pamunugama	Do.	Dona Ana	12	0	0
Borçlla	Do.	G. M. A. Wijeyesinghe	18	0	0
Peliyagoda	Do.	A. Perera	12	0	0
	Asst. do.	Miss C. Perera	9	0	0
Kaṭukurunda	Mistress	M. Fernando	12	0	0
Kandána	Do.	Maria Coorey	12	0	0
Kaṭubedda	Do.	Maria Fernando	12	0	0
Kandeliyaddepáluwa	Do.	Dona Plorentina	12	0	0
Alutgama	Do.	Dona Carlina	12	0	0
Paramulla	Do.	Mrs. J. de Silva	12	0	0
Trincomalee (Tamil)	Do.	Mrs. A. Mattheisz	40	0	0

APPENDIX E.

I.—Statement shewing the Number of Pupils on the Rolls of Schools aided by Government on the 31st December, 1869; the Average Daily Attendance during the Year 1869; the Nations to which the Pupils belong, and the Religions which they profess.

II.—Tabulated Statement shewing the Receipts and Expenditure during 1869 of the Schools aided by Government.

III.—Statement shewing the Grants made to Schools, under the Rules for Grants-in-aid of February 5th, 1861.

IV.—Rules and Regulations for Grants-in-aid of 1870.

APPENDIX E.—I.

STATEMENT shewing the Number of Pupils on the Rolls of Schools aided by Government, on the 31st December, 1869; the Average Daily Attendance during the Year 1869; the Nations to which the Pupils belong; and the Religions which they profess.

DISTRICT.	NAME OF SCHOOL.	When established.	No. on the List on the 31st Decr., 1869	Average Daily Attendance throughout the year.	NATION.									RELIGION.								
					English.	European Descendants.	Sinhalese.		Malabars.		Malays.	Moors.	Others.	Church of England.	Presbyterians.	Wesleyan.	Roman Catholics.	Christians of other Denominations.	Mohammadans.	Hindus.	Buddhists.	Others.
							Low Country.	Kandyans.	Natives of Ceylon.	Immigrants.												
Jaffna	Jaffna Boys' Seminary	1848	205	153	3	28	...	...	174	...	...	..	...	3	4	2	122	...	...	74	...	...
Do.	Do. Female Seminary	1849	213	165	3	22	...	...	188	..	...	...	...	16	...	...	189	...	...	8	...	...
Do.	Do. Central English School ...	—	151	140	2	27	...	...	120	...	1	1	...	15	15	20	1	...	2	98	...	...
Do.	Pettah Boys' English Preparatory School	1856	33	29	...	12	...	..	18	.	2	1	...	7	5	7	1	...	3	10	...	...
Do.	Wannárpannai do. do. ...	1844	41	38	...	1	...	...	36	...	...	4	...	...	...	2	..	...	4	35	...	...
Do.	Batticotta High School	1856	200	172	...	...	...	...	198	...	...	2	...	...	46	...	3	...	2	149	...	...
Point Pedro ...	Mánippáy Boys' Central School ...	1856	95	88	...	...	...	...	95	...	...	...	...	...	...	...	...	7	...	88	...	...
Trincomalee ...	Point Pedro English School ...	1861	31	26	...	..	...	...	31	...	...	...	...	...	...	4	2	...	...	25	...	...
Do.	Trincomalee Boys' English School ...	1866	36	28	...	10	...	...	23	...	3	...	...	...	...	...	34	...	2	...	...	...
Batticaloa ...	Do. Girls' English School ...	1864	30	24	10	20	...	...	...	...	...	...	...	16	...	...	14	...	...	...	...	...
Do.	Puliyantívu Boys' English School ...	1814	116	86	1	37	...	..	77	...	1	...	...	9	...	38	34	...	1	34	...	...
Colombo ...	Do. Girls' Tamil School ..	1838	55	40	...	6	...	1	47	...	1	...	...	4	...	6	19	...	1	25	...	...
Do.	Colombo Ragged (Boys') ...	1863	40	27	...	26	12	...	...	...	2	..	...	27	...	2	9	...	2	...	...	...
Batticaloa ...	Do. do. (Girls') ...	1864	32	26	...	27	5	...	...	...	...	...	...	7	...	...	25	...	...	...	...	...
Chilaw ...	Kalladi Boys' Tamil School ...	1854	23	18	...	...	...	...	23	...	...	...	...	...	...	...	...	...	...	23	...	...
Colombo ...	Chilaw Boys' English School ..	1867	25	20	...	5	18	...	...	...	1	1	...	1	...	...	21	...	2	...	1	...
Do.	New Chetty Street Girls' School ..	1858	44	50	1	21	21	...	1	...	...	...	...	27	10	...	7	...	...	...	...	...
Do.	Mutwall Boys' School	1856	98	70	...	1	92	2	...	...	...	2	1	21	...	2	47	3	3	...	22	...
Trincomalee ...	Kotahéna Girls' School	1859	34	25	...	...	11	...	15	3	...	5	...	12	...	...	7	...	5	7	3	...
					1	14	1	...	53	5	5	6	8	15	...	3	5	...	16	53	1	...
	TOTAL...	...	1595	1300	21	257	160	3	1099	8	16	22	9	180	80	86	540	10	43	629	27	...

APPENDIX E.—II.

TABULATED STATEMENT shewing the RECEIPTS and EXPENDITURE, during 1869, of the SCHOOLS AIDED BY GOVERNMENT.

NAME OF SCHOOL.	Monthly Rate of Fees.	No. of Pupils on List.	Average Daily Attendance.	RECEIPTS. From Government.	RECEIPTS. Private Subscriptions, Missionary Funds, &c.	RECEIPTS. Fees and Fines.	RECEIPTS. Total.	EXPENDITURE. Salaries.	EXPENDITURE. Rent.	EXPENDITURE. Books, &c.	EXPENDITURE. Total.	Excess of Receipts over Charges.	Excess of Charges over Receipts.	Cost of educating each Pupil. Cost to Government.	Cost to the School.	Total.
				£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Jaffna Boys' Seminary	6d. to 1s. 6d.	205	153	100 0 0	87 2 2½	77 17 8	264 19 10½	261 12 0	—	3 7 10½	264 19 10½	—	—	0 9 9	0 16 1	1 5 10
Do. Female Seminary	1s. to 2s	213	165	100 0 0	185 19 0	10 9 0	296 8 0	248 0 0	40 0 0	8 8 0	296 8 0	—	—	0 9 4½	0 18 5½	1 7 10
Do. Central English School	1s 6d to 3s. 10d.	151	140	140 0 0	239 11 6	213 5 0	612 16 6	612 16 6	—	—	612 16 6	—	—	0 18 6½	3 2 7	4 1 1½
Pettah Boys' English Preparatory School	8d to 1s. 4d	33	29	25 2 6	42 19 6	16 0 0	84 2 0	84 2 0	—	—	84 2 0	—	—	0 15 2½	1 15 9	2 10 11½
Wappáppanni Boys' English Preparatory School	8d. to 1s	41	28	34 17 6	24 18 6	18 4 0	78 0 0	78 0 0	—	—	78 0 0	—	—	0 17 0	1 1 0½	1 18 0½
Batticotta High School	6d. to 1s. 6d.	200	172	100 0 0	—	138 0 0	238 0 0	199 16 0	6 0 0	11 1 4¼	216 17 4¾	21 2 7¼	—	0 10 0	0 13 7	1 3 7
Mánippáy Boys' Central School	6d. to 1s. 9d.	95	88	36 0 0	—	43 18 5	79 18 5	69 18 0	6 0 0	—	75 18 0	4 0 5	—	0 7 6½	0 8 4½	0 15 11½
Point Pedro English School	1s. to 2s.	31	26	52 10 0	33 17 6	33 12 6	120 0 0	120 0 0	—	—	120 0 0	—	—	1 13 10¼	2 3 6½	3 17 5
Trincomalee Boys' English School	6d. to 2s.	36	28	60 0 0	64 0 0	28 0 0	147 0 0	147 0 0	—	—	147 0 0	—	—	1 13 4	2 8 4	4 1 8
Do. Girls' English School	1s. to 2s.	30	24	48 0 0	63 0 0	24 0 0	135 0 0	114 0 0	21 0 0	—	135 0 0	—	—	1 12 0	2 18 0	4 10 0
Do. Boys' English School (Wesleyan Mission)	9d. to 2s.	93	75	63 0 0	10 2 6¼	58 0 0	131 2 6¼	126 0 0	—	5 2 6¼	131 2 6¼	—	—	0 13 6½	0 14 8	1 8 2½
Colombo Girls' Ragged School	No Fees.	32	26	48 0 0	60 2 0	—	108 2 0	52 2 0	19 4 0	31 3 0	102 9 0	5 13 0	—	1 10 0	1 12 9½	3 2 9½
Colombo Boys' Ragged School	No Fees.	40	27	48 0 0	45 5 0	—	93 5 0	52 2 0	—	43 4 0	95 6 0	—	2 1 0	1 4 0	1 3 7½	2 7 7½
Kandy Industrial	—	—	—	92 8 4	—	—	92 8 4	92 8 4	—	—	92 8 4	—	—	—	—	—
Puluyantívu English School	6d. to 2s 6d.	116	86	61 10 0	10 18 4	72 4 11½	144 13 3½	130 3 9	—	14 9 6½	144 13 3½	—	—	0 10 7	0 14 4	1 4 11
Do. Girls' Tamil School	—	55	40	18 0 0	18 0 0	—	36 0 0	36 0 0	—	—	36 0 0	—	—	0 6 6½	0 6 6½	0 13 1
Kaliadi Boys' Tamil School	1½d. to 3d.	23	18	6 0 0	3 10 1½	1 8 10½	10 19 0	10 10 0	0 1 0	0 8 0	10 19 0	—	—	0 5 2½	0 4 3½	0 9 6
Chulaw Boys' English School	9d. to 1s 6d.	25	20	18 0 0	12 0 0	7 4 0	37 4 0	37 4 0	—	—	37 4 0	—	—	0 14 4½	0 15 4½	1 9 9
New Chetty Street Girls' School	1s. to 3s.	44	50	36 0 0	—	60 2 0	96 2 0	24 0 0	36 0 0	0 18 0	60 18 0	35 4 0	—	0 14 4½	1 4 4½	1 18 9½
Mutwall Boys' School	6d. to 1s.	98	70	27 0 0	18 0 0	21 6 3	66 6 3	54 0 0	9 0 0	0 12 10	63 12 10	2 13 5	—	0 5 6	0 7 5	0 12 11
Kotahéna Girls' School	1d.	34	25	6 0 0	6 0 0	1 0 0	13 0 0	12 0 0	1 0 0	—	13 0 0	—	—	0 3 6¼	0 4 1¼	0 7 7½
TOTAL...		1595	1309	1120 8 4	945 6 2¼	819 12 8	2882 18 10¼	2559 6 3	138 5 0	118 15 2	2816 6 5	68 13 5¼	2 1 0	0 14 0¾	1 1 3	1 15 3¾

APPENDIX E.—III.

STATEMENT shewing the GRANTS made to SCHOOLS under the Rules for Grants-in-aid of February 5th, 1861.

	£	s.	d.
Mánippáy English School	36	0	0
Mutwall Boys' School	27	0	0
Puliyantívu English School	61	10	0
Kallaḍi Boys' School	6	0	0
Batticotta High School	100	0	0
Point Pedro English School	52	10	0
Trincomalee Boys' English School, under the Roman Catholic Mission	60	0	0
Trincomalee Boys' English School, under the Wesleyan Mission	63	0	0
Chilaw Boys' English School	18	0	0
New Chetty Street Girls' School	36	0	0
Koṭahéna Girls' School	6	0	0
Puliyantívu Girls' School	18	0	0
Trincomalee Girls' English School	48	0	0
Kandy Industrial School	95	0	0
Colombo Girls' Ragged School	48	0	0
Colombo Boys' Ragged School	48	0	0

Roman Catholic Mission.

Govt. Grant Schools.		£	s.	d.	£	s.	d.
	Jaffna Boys' Seminary	100	0	0			
	Do. Female do.	100	0	0			
					200	0	0
	Wesleyan Mission.						
	Jaffna Central School	140	0	0			
	Pettah Boys' School	30	0	0			
	Wannárpannai Boys' School..	30	0	0			
					200	0	0

APPENDIX E.—IV.

RULES FOR GRANTS-IN-AID.

These Rules must be read in conjunction with the Appended Regulations.

1. All Schools receiving Grants-in-aid must be represented by one or more responsible Managers, who shall not derive any salary or emolument from the Grant, or from any portion of it.

2. All Schools in receipt of Grants-in-aid must be open at all times to inspection by the Officers of the Department of Public Instruction.

3. Grants will be made in the form of a fixed payment for ascertained results of secular instruction only. These results will be ascertained, and their money value computed, at the Inspector's annual examination of the School, according to the Standards set forth in Schedules A, B, and C.

4. No School shall be eligible to be examined for a Grant,
   - *a.* In which pupils are not prepared to be examined in at least two Standards;
   - *b.* In which the average daily attendance is less than 20;
   - *c.* In which the general organization falls below that required for Registration under the Letter (B) (vide Nos. 2, 3, and 4 of the Regulations).

Rule 4 *b* has been modified.—See note on page 66.

5. Managers of Schools receiving Grants-in-aid must undertake to furnish all Returns that may be required by the local Government, or by the Department of Public Instruction.

6. It is to be clearly understood, that Grants cannot be claimed under the above Rules, irrespective of the circumstances of the case, and the limits of the sum at the disposal of Government. Should a Grant be in any case refused, the reasons for refusal will be communicated to the applicants.

PROVISIONAL REGULATIONS for Grants-in-aid, based upon a system of Payment by Results.

1. Schools may be examined for Grants-in-aid either as Vernacular, Anglo-Vernacular, or English-teaching Schools.

2. All Schools, whether Vernacular, Anglo-Vernacular, or English-teaching, will be registered in the Office of Public Instruction under Letters (A) and (B).

3. The Grant for Schools registered under the Letter (B) henceforth to be called "(B) Schools," will be computed upon a scale one-sixth less than that for Schools registered under (A), henceforth distinguished as "(A) Schools."

4. For a School to be registered under Letter (A), it will be necessary that the Inspector should be able to report:—

a. That the school buildings are expressly adapted for School purposes; that they afford sufficient accommodation; and are in good repair at the time of the examination.

b. That the School is not surrounded by other buildings, to such an extent as to exclude light and air; and that particular regard is paid to health and cleanliness, both in the persons of the pupils and in the arrangements and condition of the School premises.

c. That the supply of School materials—maps and other appliances for teaching, desks, black-boards, and other furniture; books, writing materials, &c.—are in sufficient quantity, in good order, and of the most approved kind; regard being had to the class and circumstances of the School.

d. That the regular work of the School is conducted in an orderly and disciplined manner, and that (especially in large Schools) some attention is paid to drill.

Conspicuous shortcomings in any of the more important of the above particulars will exclude a School from all claim to be examined for a Grant. A reasonable degree of excellence in *every one* of these particulars is required to entitle a School to rank under the Letter (A), and to participate in the higher scale of Grants; all other Schools (not excluded from a Grant) will be ranked under Letter (B), and will have their Grants computed upon the corresponding lower scale.

5. For Vernacular and Anglo-Vernacular Schools four Standards, and for English-teaching Schools six Standards, of examination are prescribed. (*See Schedules* A, B, *and* C.) These Standards are severally distributed into various heads of examination. Every pupil will be examined separately in each head of the Standard in which he is presented, and the examination will result either in a "pass," or in failure.

6. The total number of "passes" achieved in a School will determine the amount of its Grant.

7. The computation of the money value of each "pass" is based upon a Unit of Instruction. The mechanical ability to form letters and figures on a slate or black-board is taken as the Unit of Instruction, and the "passes" in every head of each Standard are expressed in multiples of this Unit, which is the writing of the First Standard. The money value of the Unit being fixed, the value of each "pass" is determined. (*See Schedule* D.)

8. For Vernacular and Anglo-Vernacular Schools the money value of the Unit of Instruction is fixed at one shilling for (A) Schools, and tenpence for (B) Schools.

9. For English-teaching Schools the money value of the Unit of Instruction is fixed at one shilling and sixpence for (A) Schools, and one shilling and threepence for (B) Schools.

10. In presenting children for examination under this system, the following rules must be strictly observed:—

a. No child can be examined in a School, who has not been a bonâ fide pupil in that School for the whole of the twelve months immediately preceding the examination.

Regulation 10 *b.* has been considerably modified.—See note on p. 66.

b. At a *first* examination, children may be grouped in any Standard that it is thought that they will be able to pass in; but no child, who has once been presented for examination in a given Standard, *can be examined again, either in the same or in any lower Standard.*

c. No pupil shall be presented for examination in any Standard, who shall be under six, or above twenty, years of age at the time of the examination.

Managers will be required to sign a declaration, that these conditions have been faithfully observed.

11. No Grant will be allowed to any School, in which the number of "passes" achieved at the examination is less than 45 per cent. of the whole number obtainable.

12. For the present, Schools for Girls will be classed and examined upon the same plan as Schools for Boys, and their Grants will be computed upon the same scale; but, in addition, a fixed allowance will be made of one shilling per head for good plain sewing, and one shilling and sixpence for very superior work of the same kind, to any pupil of an (A) School, who shall have also passed in two of the three heads of Reading, Writing, and Arithmetic, according to the Standard in which she shall have been examined. For pupils in (B) Schools, the above allowances will be fixed at ten pence, and one shilling and threepence, respectively

SCHEDULE

A.

VERNACULAR SCHOOLS.

Standard I. (*Lowest.*)

1st Head.—Reading. A few sentences from a First Book, distinctly and accurately pronounced.
2nd Head.—Writing. A few short words out of the Reading Book.
3rd Head.—Arithmetic. Notation to thousands, easy Addition (of numbers consisting of not more than two digits), and the Multiplication Table to five times five.

See note on p. 66.

Standard II.

1st Head.—Reading. A few sentences from a Second Reading Book, slowly and distinctly read.
2nd Head.—Writing. From Dictation: short sentences out of the Reading Book.
3rd Head.—Arithmetic. Subtraction, Multiplication, and Short Division.

See note on p. 66.

STANDARD III.

1st Head.—READING. Clear and intelligible reading from a more advanced book.
2nd Head.—WRITING. From Dictation: a connected passage from the Reading Book, containing two or three sentences.
3rd Head.—ARITHMETIC. Long Division, and Addition and Subtraction of Money.

See note on page 66.

Copy writing may be shewn in this Standard, but will not be counted unless the pupil shall have also passed in two of the other heads.

STANDARD IV.

1st Head.—READING. Good and intelligent reading from a suitable book.
2nd Head.—WRITING. From Dictation; a passage from the Reading Book.
3rd Head.—ARITHMETIC. The Compound Rules and Reduction (in Money, Weights, and Measures).
4th Head.—GEOGRAPHY. Definitions, and Ceylon.

Copy writing may be shewn in this Standard, but will not be counted unless the pupil shall have also passed in two of the first three heads.

No Vernacular copy writing will count that is not written on clean and good paper; and not less than one month's work must be shewn to the Inspector.

English figures must be used under the 3rd head in each Standard.

SCHEDULE

B.

ANGLO-VERNACULAR SCHOOLS.

STANDARD I.

1st Head.—As in *Vernacular Schools*
2nd Head.—As in *Vernacular Schools*.
3rd Head.—As in *Vernacular Schools*.

STANDARD II.

1st Head.—As in *Vernacular Schools*.
2nd Head.—As in *Vernacular Schools*
3rd Head.—As in *Vernacular Schools*.
4th Head.—ENGLISH READING. From a First Book; a few words accurately pronounced, and their meanings rendered in the vernacular.

STANDARD III

1st Head.—As in *Vernacular Schools*.
2nd Head.—As in *Vernacular Schools*.
3rd Head.—As in *Vernacular Schools*
4th Head.—ENGLISH READING. From a Second Book; a few sentences fairly read, and the meanings of single words given in the vernacular.
5th Head.—ENGLISH WRITING. Letters, small and capital, and words of one syllable on slate or black-board.

Vernacular copy writing may be shewn in this Standard under the conditions laid down for Vernacular Schools.

English copy writing (single letters in large text) may be shewn in this Standard, but it will not be counted unless the pupil shall have also passed in one of the 4th and 5th heads.

STANDARD IV.

1st Head.—As in *Vernacular Schools*.
2nd Head.—As in *Vernacular Schools*.
3rd Head.—As in *Vernacular Schools*.
4th Head.—As in *Vernacular Schools*.
5th Head.—ENGLISH READING. Clear and intelligible reading from a Third Book, and sentences rendered into the vernacular.
6th Head.—ENGLISH WRITING. From Dictation; a passage from a Second Book, containing two or three short sentences.

Vernacular copy writing may be shewn in this Standard under the conditions prescribed for Vernacular Schools. English copy writing in large round text may also be shewn in this Standard, but it will not be counted unless the pupil shall have also passed in one of the 5th and 6th heads.

No copy writing will be allowed to count that is not written on clean and good paper. English copy writing must be *from printed models*. One month's work at least must be shewn to the Inspector.

English figures must be used under the 3rd head in each Standard.

PUBLIC INSTRUCTION.

Appendix E.—IV.

SCHEDULE

C.

ENGLISH-TEACHING SCHOOLS.

STANDARD I. *(Lowest.)*

1st Head.—READING. A few sentences from a First Book, distinctly and accurately pronounced.
2nd Head.—WRITING. A few short words dictated out of the Reading Book.
See note below. 3rd Head.—ARITHMETIC. Notation to thousands, easy Addition (of numbers consisting of not more than two digits), and the Multiplication Table to five times five.

STANDARD II.

1st Head.—READING. A few sentences from a Second Reading Book, slowly and distinctly read.
2nd Head.—WRITING. From Dictation; short sentences out of the Reading Book.
See note below. 3rd Head.—ARITHMETIC. Subtraction, Multiplication, and Short Division.

Copy writing (single letters in large text) may be shewn in this Standard, but it will not be counted unless the pupil shall have passed in two of the other heads.

STANDARD III.

1st Head.—READING. Clear and intelligible reading from a more advanced book.
2nd Head. WRITING From Dictation; a connected passage from the Reading Book, containing two or three sentences.
See note below. 3rd Head.—ARITHMETIC. Long Division, and Addition and Subtraction of Money.

Copy writing in Large Round Text may be shewn in this Standard, but it will not be counted, unless the pupil shall have passed in two of the other heads

STANDARD IV.

1st Head.—READING. Good and intelligent reading from a suitable book.
2nd Head.—WRITING. From Dictation; a passage from the Reading Book.
3rd Head.—ARITHMETIC. The Compound Rules and Reduction (in Money, Weights, and Measures).
4th Head.—GEOGRAPHY. Definitions, and Ceylon.

Copy writing in small round text may be shewn in this Standard, but it will not be counted unless the pupil shall have passed in two out of the first three heads.

STANDARD V.

1st Head.—READING. Clear and intelligent reading, with proper emphasis, from a suitable book.
2nd Head.—WRITING. A passage to dictation from the Reading Book.
3rd Head. ARITHMETIC. Practice and Simple Proportion.
4th Head. GEOGRAPHY. Definitions, Ceylon, and Asia.
5th Head GRAMMAR. A simple sentence accurately parsed (orally, or in writing, at the option of the Inspector).

Copy writing in a running hand may be shewn in this Standard, but it will not be counted unless the pupil shall have passed in two out of the first three heads.

STANDARD VI.

1st Head.—READING. Good fluent reading, with explanation and grammar, from any English Prose Classic.
2nd Head —WRITING. From memory; the substance of a short story or narrative, read out twice by the Inspector, spelling, hand-writing, and grammar to be considered.
3rd Head. ARITHMETIC. The same as in Standard V., with the addition of Compound Proportion, Simple Interest, and Vulgar and Decimal Fractions.
4th Head.—GEOGRAPHY. Definitions, Ceylon, Asia, and Europe.
5th Head.—GRAMMAR. A complex sentence to be analysed and parsed in writing.
6th Head.—HISTORY. A portion (comprising not less than 100 pages of an ordinary text book) of any History of India *or* of England. Orally or in writing, at the option of the Inspector.

No English copy writing will be allowed to count, which is not written upon clean and good ruled paper, *and from a printed model*. One month's work at least must be shewn to the Inspector.

Note.—The following modifications and alterations have been introduced into the above Rules since they were published, viz.:—

1. The Arithmetic in Standards 1, 2, and 3, has been lowered.

In the 1st Standard, Notation to hundreds, and Addition (orally) of numbers up to 20.
In the 2nd Standard, Simple Addition, and Subtraction.
In the 3rd Standard, Simple Multiplication, and Division.

2. Regulation 10 *b* will be so modified as to allow the same child to pass twice in each of the 3rd, 4th, and 5th Standards, and 3 times in the 6th Standard.

3. Rule 4 *b* will be altered in the case of Girls' Schools; a minimum attendance of 15, instead of 20, being adopted.

SCHEDULE

D.

SHEWING the Value of a "Pass" in each Head of Examination in the several Standards, expressed in terms of the Unit of Instruction; also the Money Value of all the "Passes" obtainable in each Standard for (A) Schools and (B) Schools, respectively.

VERNACULAR SCHOOLS.

	Heads of Examination.					Maximum obtainable by each Pupil passing in every Head	Money Value in (A) Schools. Value of Unit, 1*s.*	Money Value in (B) Schools. Value of Unit, 10*d.*
	1st Head Reading.	2nd Head. Writing.	3rd Head Arithmetic.	4th Head. Geography	Copy Writing			
							£ *s.* *d.*	£ *s.* *d.*
Standard I.	2	1	2	—	—	5	0 5 0	0 4 2
Standard II.	3	2	3	—	—	8	0 8 0	0 6 8
Standard III.	4	3	4	—	1	12	0 12 0	0 10 0
Standard IV.	4	4	5	3	2	18	0 18 0	0 15 0

ANGLO-VERNACULAR SCHOOLS.

	Heads of Examination.								Money Value in (A) Schools. Value of Unit, 1*s*	Money Value in (B) Schools. Value of Unit, 10*d.*
	1st Head. Vernacular Reading	2nd Head. Vernacular Writing	3rd Head. Arithmetic.	4th Head. Geography.	5th Head. English Reading	6th Head English Writing	Vernacular Copy Writing	English Copy Writing		
									£ *s.* *d.*	£ *s.* *d.*
Standard I.	2	1	2	—	—	—	—	—	0 5 0	0 4 2
Standard II.	3	2	3	—	2	—	—	—	0 10 0	0 8 4
Standard III.	4	3	4	3	—	1	1	1	0 17 0	0 14 2
Standard IV.	4	4	5	3	4	2	2	2	1 6 0	1 1 8

ENGLISH-TEACHING SCHOOLS.

	Heads of Examination.							Maximum obtainable by each Pupil being a "Pass" in every Head.	Money Value in (A) Schools. Value of Unit, 1*s* 6*d.*	Money Value in (B) Schools. Value of Unit, 1*s.* 3*d.*
	1st Head. Reading.	2nd Head. Writing.	3rd Head. Arithmetic.	4th Head. Geography	5th Head. Grammar.	6th Head. History	Copy Writing.			
									£ *s.* *d.*	£ *s.* *d.*
Standard I. ...	2	1	2	...	—	—	—	5	0 7 6	0 6 3
Standard II. ...	3	2	3	—	—	—	1	9	0 13 6	0 11 3
Standard III. ...	4	3	4	—	—	—	2	13	0 19 6	0 16 3
Standard IV. ...	5	4	5	3	—	—	3	20	1 10 0	1 5 0
Standard V. ...	5	5	6	4	6	—	4	30	2 5 0	1 17 6
Standard VI. ...	5	6	7	5	7	5	—	35	2 12 6	2 3 9

PUBLIC INSTRUCTION.

Appendix E.—IV.

[GRANTS-IN-AID.]

SCHEDULE B.

Shewing the amount of Grant actually obtainable upon the proposed system in various classes of Schools.

Case 1.—A Vernacular (A) School of about 50 children.

45 are presented for examination. 90 per cent. of passes are obtained.

					£	s.	d.
12	in Standard I. ;	90 per cent. of passes	will yield	.. ..	2	14	0
15	Do. II. ;	do.	do.	.. ..	5	8	0
10	Do. III. ;	do.	do.	.. ..	5	8	0
8	Do. IV. ;	do.	do.	.. nearly	6	9	6
Total 45				Total amount of Grant	£19	19	6

Case 2.—In a (B) School, of the same class, and under the same conditions, the result will be as follows :

					£	s.	d.
12	in Standard I. ;	90 per cent. of passes	will yield	.. ..	2	5	0
15	Do. II. ;	do.	do.	.. ..	4	10	0
10	Do. III. ;	do.	do.	.. ..	4	10	0
8	Do. IV. ;	do.	do.	.. ..	5	8	0
Total 45				Total amount of Grant	£16	13	0

If 60 per cent. of passes were obtained, the result would be

	£	s.	d.
Grant to the (A) School	13	6	4
Grant to the (B) School .. .	11	2	0

NOTE.—90 per cent. of passes would imply a very good School ; 60 per cent., an indifferent one. A mean between the two, which would imply a good average School, would give about £16 13*s.* 0*d.* to the (A) School, and £13 17*s.* 6*d.* to the (B) School, of 50 pupils.

Case 3.—An Anglo-Vernacular (A) School of about 50.

45 are presented for examination. 90 per cent. of passes are obtained.

					£	s.	d.
12	are examined in Standard I. ;	90 per cent of passes	will yield	.	2	14	0
15	Do. II. ;	do.	do.	..	6	15	0
10	Do. III. ;	do.	do.	..	7	13	0
8	Do. IV. ;	do.	do.	..	9	7	0
Total 45				Total amount of Grant	£26	9	0

Case 4.—In a (B) School, under the same circumstances, the result would be :

					£	s.	d.
12	in Standard I. ;	90 per cent. of passes	will yield	.. ..	2	5	0
15	Do. II. ;	do.	do.	.. ..	5	12	6
10	Do. III. ;	do.	do.	.. ..	6	7	6
8	Do. IV. ;	do.	do.	.. ..	7	16	0
Total 45				Total amount of Grant	£22	1	0

60 per cent. of passes under the same circumstances would give

	£	s.	d.
To the (A) School . ..	17	12	8
To the (B) School	14	14	0

And a mean between the two results would give, for a good average Anglo-Vernacular (A) School of about 50 pupils, a grant of about £22 0*s.* 0*d.* ; and, to a (B) School of the same kind, a grant of £18 7*s.* 6*d.*

Case 5.—An English-teaching (A) School of about 50.

45 are brought up for examination. 90 per cent. of passes are obtained.

					£	s.	d.
10	are examined in Standard I. ;	90 per cent. of passes	will yield	..	3	7	6
12	Do. II. ;	do.	do.	..	7	5	6
8	Do. III. ;	do.	do.	..	7	0	0
6	Do. IV. ;	do.	do.	.	8	2	0
5	Do. V. ;	do.	do.	..	10	2	6
4	Do. VI. ;	do.	do.	..	9	9	0
Total 45				Total amount of Grant	£45	6	6

Case 6.—A (B) School of the same kind, under the same circumstances.

				£	s.	d.
10	in Standard I. ;	90 per cent. of passes	will yield	2	16	3
12	Do. II. ;	do.	do.	6	1	3
8	Do. III. ;	do.	do.	5	16	9
6	Do. IV. ;	do.	do.	6	15	0
5	Do. V. ;	do.	do.	8	8	9
4	Do. VI. ;	do.	do. ..	7	17	6
Total 45			Total amount of Grant	£37	15	6

At 60 per cent. of passes the results would be,

	£	s.	d.
To the (A) School ..	30	4	4
To the (B) School	25	3	8

A mean between the two results would give, to a good average English-teaching (A) School of about 50 pupils, a grant of about £37 15*s.* 6*d.* ; and to a (B) School of the same kind, a grant of about £31 10*s.* 0*d.*

Case 7.—An English-teaching (A) School of about 100.

90 are presented for examination. 90 per cent. of passes are obtained.

				£	s.	d.
20	are examined in Standard I. ;	90 per cent. of passes	will yield .	6	15	0
15	Do. II. ;	do.	do. ..	9	2	3
15	Do. III. ;	do.	do. ..	13	3	3
15	Do. IV. ;	do.	do. ..	20	5	0
15	Do. V. ;	do.	do. ..	30	7	6
10	Do. VI. ;	do.	do. ..	23	12	6
Total 90			Total amount of Grant	£103	5	6

Case 8.—A (B) School of the same kind, under the same circumstances.

				£	s.	d.
20	in Standard I. ;	90 per cent. of passes	will yield	5	12	6
15	Do. II. ;	do.	do ..	7	11	10½
15	Do. III. ;	do.	do. . .	10	19	4½
15	Do. IV. ;	do.	do.	16	17	6
15	Do. V. ;	do.	do.	25	6	3
10	Do. VI. ;	do.	do.	19	13	9
Total 90			Total amount of Grant	£86	1	3

If 60 per cent. of passes were obtained, the result would be

	£	s.	d.
Grant to the (A) School	68	17	0
Grant to the (B) School	57	7	6

And a mean between the two results would give, for a good average English (A) School of 100 pupils, a grant of about £86 0*s.* 0*d.* ; and, for a (B) School of the same kind, a grant of about £71 15*s.* 0*d.*

APPENDIX F.

I.—Tabulated Statement of the progress of Elementary Secular Instruction in Schools inspected during the half-year ending 30th June, 1870.

APPENDIX F.

TABULATED STATEMENT of the progress of Elementary Secular Instruction in Schools inspected during the half-year ending 30th June, 1870.

E. Excellent; **G.** Good; **F.** Fair; **I.** Imperfect; **B.** Bad.

GOVERNMENT SCHOOLS.	Number.		State of School with respect to			Reading.				Writing.					Arithmetic.			Letter indicating proficiency in Grammar.	Letter indicating proficiency in History.	Letter indicating proficiency in Geography.
	On the List.	Present at Inspection.	Buildings and Accommodation.	Furniture.	Maps and other Apparatus.	Number examined	Number classed as Good.	Fair or Moderate.	Imperfect.	Copy-writing, general character of	Dictation. Number examined.	Number classed as Good.	Fair or Moderate.	Imperfect.	Number examined in Simple Rules, with Letter indicating proficiency.	Number examined in Compound Rules, with Letter indicating proficiency.	Number examined in higher Rules, with Letter indicating proficiency.			
Anglo-Vernacular Schools.																				
Maggona	57	45	G	G	G	45	2	18	25	F	27	..	9	18	31 23, G	4, G	4, G	G	...	F
Kandana	27	22	G	G	G	22	3	15	4	F	16	3	8	5	17 10, G	4, G	...	F	...	F
Bentota	76	61	G	F	F	35	5	21	9	F	35	5	26	4	11	24	..	F	..	F
Vernacular Schools.																				
Kohilawatta	39	39	G	G	G	20	12	3	5	F	20	8	6	6	8	12	...	..	..	I
Watugoda	...	17	F	G	G	11	5	4	2	F	7	4	1	2	7	...	..	..	...	..
Pélıyagoda Girls' ...	95	47	G	G	G	31	10	15	6	F	...		...	...	..	...	..	...	...	...
Do Boys' .	59	52	G	G	G	52	16	24	12	F	31	18	9	4	18 16, F	8 6, F	..	..	...	F
Mattakkuli	132	103	B	G	G	103	27	32	41	F	72	20	30	22	18 16, G	20 13, G			..	F
Slave Island ...	43	34	G	G	G	34	19	12	3	F	13	5	6	2	13 8, F	7 5, F	...	...	.	F
Pánaduré (Boys') No. 2.	52	32	F	G	G	21	12	3	5	F	6	2	3	1	6 2, G	...	..		.	F
Do. (Girls') No. 2	53	36	G	G	G	30	3	18	9	F	18	6	8	4	18 15, G	..		...	.	F
Warágoda Boys .	48	42	F	G	G	30	2	16	12	F	30	1	6	23	11, F	...	.	.	I	I
Pánaduré (Boys') No. 1.	35	34	G	G	G	20	6	5	9	F	8	1	4	3	12 10, F	5 2 G	..	...	...	I
Tantirimulla	38	34	F	F	G	27	9	16	2	F	27	8	13	6	12 8, G	2 2, G	...	...	...	B
Wádduwa	110	96	F	G	G	24	8	11	5	F	24	13	8	3	18 14, G	...	...	...	F	F
Desastera Kalutara Girls'.	58	49	G	G	G	28	9	6	13	F	28	14	9	5	14 6, G	..	...	...	...	F
Maggona.	147	126	F	G	G	126	46	43	39	G	88	28	30	30	30 G	9, G	9, G	..	F	F
Béruwala	66	59	G	B	..	44	3	19	22	F	33	5	14	14	13 G	2, G	...	..	F	B
Maggona Girls' . .	57	56	F	..	G	44	3	34	7	F	22	5	8	9	22 13, G	...		...		F
Payyagala	68	65	G	G	G	37	3	26	8	F	36	1	17	18	36	33	..	...	.	F
Katukurunda ...	57	46	F	G	G	34	1	22	11	F	19	4	11	4	11 13, G	5 4, G		...	.	I
Do. Girls' .	27	27	...	.	F	21	4	11	6	F	8		4	4	...	...	.	...	..	...
Indibetta...	52	44	I	I	G	25	1	11	13	F	18	3	9	6	1, G	13, G	. .	...	...	F
Do Girls'	40	38	F	I	F	17		16	1	F	17	1	11	5	13, G	..	.	..	...	I
Henarutgoda ..	61	55	F	G	F	39	5	21	13	F	39	4	13	22	27, G	4, G		...	F	F
Uḍugampola . . .	83	73	G	G	G	43	7	34	2	G	40	2	20	18	31 15, G	7 4, G	..	...	F	F
Hinkenda	100	96	F	G	G	77	1	60	16	F	54	10	21	23	66 25, G	4, G	1, F	...	F	F
Biyanwila	60	57	F	G	G	37	2	27	8	G	30	14	7	9	23 17, G	7, G	...	. .	F	F
Kandeliyaddepáluwa	60	58	G	G	G	46	5	35	6	G	25	15	11	9	18 14, G	12, G	..		F	F
Pattiwela	51	51	F	G		36	4	15	17	G	51	6	22	23	27 18, G	5, G	2, G	...	F	F
Biyagama	44	43	B	G	G	32	5	15	12	F	21	2	4	15	13, B	8, B	...	...	F	F

PUBLIC INSTRUCTION.

APPENDIX F.— *continued.*)

GOVERNMENT SCHOOLS	Number		State of School with respect to			Reading.				Writing					Arithmetic.			Letter indicating proficiency in Grammar.	Letter indicating proficiency in History.	Letter indicating proficiency in Geography.
	On the List.	Present at Inspection	Buildings and Accommodation.	Furniture.	Maps and other Apparatus.	Number examined.	Number classed as Good.	Fair or Moderate.	Imperfect.	Copy writing, general completion of.	Dictation Number examined.	Dictation Number classed as Good.	Dictation Number classed as Fair and Moderate.	Dictation Number classed as Imperfect.	Number examined in Simple Rules, with Letter indicating proficiency.	Number examined in Compound Rules, with Letter indicating proficiency.	Number examined in higher Rules, with Letter indicating proficiency.			
Vernacular Schools.																				
Mahara (Watákanatta)	61	51	G	G	G	33	12	17	4	G	23	4	11	8	14 8, G	9 7, G	..	..	F	F
Hapugahakanda Girls'	25	25	G	G	G	4		4	.		..	..	...	.	...	...	...	...	..	
Dandugamua	76	55	F	F	G	22	4	16	2	F	21	5	8	8	19 12, G	3, G	..	.	I	F
Kandana Girls'	26	27	G	.		12	8		4	..	..	..		.	.	.	..	..		...
Siduwa	47	47	F	B	B	21	4	15	2	F	30	3	12	15	19 17, G	...	...	...	F	F
Waskaduwa (Pohaddaramulla)	19	19	F	G	G	17	9	6	2	F	10	1	4	5	10, B	2, B	2, B	.		B
Tillandawa	15	15	F	B	F	17	..	13	4	B	14	..	3	11	1 G	.	...	..	I	I
Katuru	118	89	F	G	F	62	6	33	23	F	53	9	25	19	39 32, G	14, G	.	.	F	F
Kandawala	57	57	F	F	F	26		12	14	F	16	3	3	10	18 18, G	3 2, G	.	...	I	F
Vidambalam	51	51	B	B	B	36	10	19	7	F	36	7	19	10	9 31, G	.	.	...	F	F
Miriswatta	53	35	F	G	G	18	.	14	4		12	6	3	3	10, F		...	.		..
Godigamuwa	47	19	F	G	G	18	.	13	5	F	10	1	4	5	10, F	..	...	...	..	
Kattuwa	48	23	F	G	G	14	1	9	4	F	9	2	4	3	9, F		...	..	...	
Pammungama Boys'	71	67	F	G	G	47	15	15	17	F	30	3	14	3	22, F	5, F	3, F		F	F
Do Girls'	35	29	F	G	G	19	1	18	..	F	9	2	3	4	9, F	...	..	...	..	
Wattegoda	30	26	F	G	G	23		20	3	8, F	15	2	1	12	8, B	4, B	...	...		...
Hangwella	18	13	F	G	G	12		8	4		5	.	4	1	7, B	...	...	...		...
Ahibomulla Boys'	63	62	F	G	G	28		24	5	9, F	19		2	17	19, F	..	...	...		
Bandaranama do	48	42	B	B	B	16		10	6	7, F	16	1	4	11	16, F	...	...	..	...	
Do. Girls'	25	20	F	F	F	8		7	1	3, F	9	.	5	4	9, F	..	...	...	...	
Gelanigama do	27	27	B	F		8	..	8	...	5, F	6	.	5	1	6, B	..	.	...	..	...
Katubedda Boys'	33	30	F	F	F	17	..	11	6	15 F	17	4	7	6	9, F	...	..	...		F
Do Girls'	14	14	F	F	.	5	...	2	3	4, F	6	1	4	1	4, F	...	...	...	...	.
Pinahute (Boys') No. 1	40	27	I	G	G	14	.	12	2	4, F 2, F	14	...	4	10	10	4	...	...	.	
Do (Girls') No. 1	25	13	F	F		6	...	5	1	4, B	6	...	5	1	1	1	2	...	...	.
Udugampola	99	82	F	F	F	55	14	27	13	10, B	69	8	14	17	78	3	...	...	F	F
Alutgama Girls'	30	25	F		...	.	.	.	..	.	...	..	...	..	..	...		...	...	...
Katana Boys	124	95	F	F	F	80	50	10	20	F	55	14	21	20	45	10	...	...	F	F
Siduwa do	51	49	B	I	F	47	10	20	17	F	42	5	21	17	32	8	.	...	F	F
Wattala do	69	58	B	I	F	34	13	13	8	F	49	6	29	20	42	..	...	...	F	F
Milagiriya do.	40	30	G	F	F	29	5	10	14	F	28	2	13	13	4	25	...	.	...	F
Attidiya Girls'	25	19	F	F	F	10	1	7	2	F	5	.	4	1	5	..	..	...		
Do. Boys'	42	33	G	F	F	21	2	13	6	F	21	4	5	12	11	10	..	.		F
Mauritiumulla Boys'	39	33	F	F	F	24	2	20	2	F	16	2	4	10	2	3	...	...	...	F
Beruwala Boys'	76	61	F	F	F	38	23	12	3	F	38	13	17	8	25	4	7	...	F	F
Desastera Kalutara Girls'	99	79	I	F	F	31	4	23	7	F	16	3	12	1	16	...	...	.	...	F
Waskaduwa (Pohaddaramulla)	25	20	F	F	F	19	...	...	...						...	...	..	...		.
Pelivagoda Boys'	78	74	F	F	F	65	25	26	15	G	37	5	23	9	36	1	...	F.	...	F
Do Girls'	95	74	F	F		41	14	28	2	G	29	6	17	6	21	.	...	.	..	F
Hapugahakanda Boys'	37	27	F	G	G	27	.	15	12	B	11	3	4	4	4, G	2, G	...	...	B	B

VIII.

SUPPLEMENTARY SUPPLY BILL, 1870.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to Report upon the Bill, "An Ordinance for making provision for the Supplementary Contingent Charges for the Year 1870."

Ordered by the Legislative Council to be Printed.

COLOMBO:
PRINTED BY WILLIAM SKEEN, GOVERNMENT PRINTER, CEYLON.

1870.

EXTRACT from the MINUTES of the LEGISLATIVE COUNCIL, held at the Council Chamber on Wednesday, the 19th day of October, 1870.

"Resolved.—That the following Gentlemen be appointed a Sub-Committee to Report upon the Bill:

'An Ordinance for making provision for the Supplementary Contingent Charges for the year 1870.'

"The Hon'ble H. T. IRVING, Colonial Secretary.

"The Hon'ble J. DOUGLAS, Auditor-General.

"The Hon'ble G. VANE, Treasurer.

"M. COOMARA SWAMY, Esquire,
"A. WISE, Esquire,
"D. WILSON, Esquire,
} Unofficial Members."

SUPPLEMENTARY SUPPLY BILL.

REPORT.

THE Sub-Committee appointed to report upon the Supplementary Supply Bill for the year 1870, have considered the estimates submitted to them, and report as follows :—

No. 1.—ESTABLISHMENTS.

SECRETARIAT.

PRINTING BRANCH.

An additional vote of £155 is required for Contract work and Contingencies, in consequence of an increased expenditure arising from the preparation of the Administration Reports and of Census Returns, and from the purchase of type not previously provided for.

PROVINCIAL AGENCIES.

WESTERN PROVINCE.

£40 for pay of the Teacher of the Military Orphan Boys' Asylum is a re-vote, being a transfer from the votes for the Academy.

POST OFFICE.

WESTERN PROVINCE.

A vote of £40 is required for Green paper for receipts for Registered letters, and £10 for Brown Cartridge envelopes; no provision appears to have been made for the former, and an insufficient provision for the latter, in the Supply Bill for the year.

NORTHERN PROVINCE.

£30 for pay of Post-Holders at Vavóniya Velánkulam and at Chávakachchéri, is required to supply an omission in the estimates for the year.

£25 is asked for under the head of Contingencies, in addition to £35 previously voted.

The attention of the Sub-Committee has been attracted to the large sums asked for for the Contingencies of the Post Office.

HARBOUR DEPARTMENT.

MASTER ATTENDANT, GALLE.

£23 17*s*. 9*d*. is required under the head of Contingencies, for the purchase of Signal Flags to introduce the new Code, and for Mooring Chains.

DISTRICT COURTS.

DISTRICT JUDGES.

The salary of an Extra Clerk in Colombo, and an allowance for an Extra Clerk in Kandy, in consequence of the interdiction and removal from office of the late Secretary of the Kandy District Court, amount together to £115 19*s*. A portion of this expenditure will be saved on the salary of the dismissed Secretary.

THE SERVICE TENURES' COMMISSION.

Provision, amounting to £674 17*s*. 7*d*., is made for Salaries and Contingencies from March last, when the work commenced.

Courts of Requests and Police Courts.

KURUNÉGALA.

An Additional Commissioner of Requests and Police Magistrate has been at work at this station since January.—It is explained that this appointment was absolutely necessary, and a vote of £284 13*s.* 6*d.* is required for the salary of the Officer.

Pánaduré.

The salaries under this head for December 1868, amounting to £48 13*s.* 4*d.*, were not drawn until January, and a re-vote is requisite.

Fiscals in the Provinces, including Gaols.

The salaries for the year of Process Servers and Gaol Guards at the stations of Avisáwélla, Kalutara, Kégalla, Negombo, and Pánaduré, amounting to £143 8*s.*, were omitted in the estimates of the year, and provision is now made for them.

The Superintendent of the Colombo Convict Establishments.

The salary of an Overseer from the 1st January to 31st December was also omitted from the estimates, and a vote of £40 is now required to supply the omission.

Colonial Storekeeper.

£96 19*s.* 3*d.*, asked for under this head, is to make up the salary of the Acting Assistant Storekeeper to £300 per annum.

No 3. Revenue Services, (exclusive of Establishments).

£1,175 6*s.* 6*d* is required under this head, of which:

£200 is to pay off arrears of unsettled accounts with Headmen for past years, principally at Nuwara Eliya.

£600 in the North-Western Province, is expenditure consequent on the Arrack farm of the Seven Kórales being conducted in aumani for the first six months of the year.

£111 12*s.* 6*d* is for Law prosecutions, in a case instituted at Ratnapura, in which the Crown was unsuccessful

£263 14*s.* is for remuneration to Assessors, and Commission to Retailers of Arrack in the several Provinces.

This expenditure is mainly contingent upon Revenue collected.

No. 4.—Administration of Justice.

The amount required under this head, £215 7*s.*, by the Provincial Agents, District Judges, Commissioners of Requests and Police Magistrates, and Fiscals, is for refund of Fines, Inquests, and Fees to Medical Officers, and for accommodation to Jurors.

The Fiscal for the North-Western Province asks for £50, in addition to £150 previously voted.

£60 additional is required by the Fiscal, Southern Province, £120 having been voted in the Supply Bill for the year.

The Sub-Committee desire to call attention to the large supplementary votes required to cover the cost of Inquests, and to suggest that a strict control be exercised over this item of expenditure.

No. 8.—Hospitals.

The Agent for the Southern Province asks for £100, in addition to £460 previously voted, for provisions and other necessaries for patients.

The Agent for the Central Province requires £260 for the equipment and petty expenses of the new Civil Hospital.

No. 9.—Police and Gaols.

£3,478 is required under this head, for the expenses of Prisoners in the Western, North-Western, and Southern Provinces, owing partly to an under-estimate in the Supply Bill, and partly to a delay in transferring Convicts to the Northern Province for the construction of the Mannár Causeway. A vote of £1,500 was taken for the expenses of those Convicts in the Northern Province during the current year. As they did not proceed to Mannár until the beginning of November, a large part of that vote will be unexpended, but it is necessary to re-vote the amount thus saved in the Northern Province, to meet the expenses of the Prisoners while detained in the other Provinces.

10.—Rent.

£262 10*s.* is asked for, for the rent of premises in the Fort of Colombo occupied by the Registrar-General, the Director of Public Instruction, and the Inspector of Prisons, for ten months of the year.

It is explained that it was desirable to provide Offices for these Departments in the Fort.

No. 11.—Transport.

Under this head is included £640 to provide for the Travelling Allowances of the Service Tenures' Commissioner and his Staff; and a further sum of £289 19*s.* 9*d.* to meet the travelling expenses of the Headmen of the Southern Province to be present at the reception of the Duke of Edinburgh. A further sum of £190 19*s.* 9*d.* is required for the Travelling Allowances of the Auditor-General and his Department, and for the various Provincial Agents and Commissioners of Requests, making a total of £1,120 19*s.* 6*d.* This extra expenditure will be more than counterbalanced by savings in the votes for Transport for other Departments of the Government.

No. 13.—Works and Buildings.

The votes required under this head, amount to £1,259 1*s.* 5*d.*, and include £896 10*s.* 8*d* for improvements and repairs to Queen's House, Colombo, and the Pavilion, Kandy, in addition to £2,346 10*s.* 10*d.* voted in the Supplementary Supply Bill of 1869.

No. 14.—Roads, Streets, Bridges, and Canals.

DEPARTMENTAL CHARGES.

£1,821 4*s.* 3*d.* asked for includes an amount of £641 18*s.* 4*d.*, being the amount of a judgment against the Government in the case of a Chetty's claim for Rice supplied.

This vote may be reduced by the sum of £225 15*s.* 7*d.*, being the amount recoverable from Captain Oldfield and Mr. Campbell, the officers through whose culpable negligence the loss was incurred.

The Committee desire to express their hope, that such steps have been taken by the Government as will render impossible the recurrence of similar loss to the Revenue.

£500 is included for the cost of Photographs of the principal Buildings and of the various Races of this Island, taken at the request of the Imperial Government.

The Sub-Committee recommend that these Photographs should be publicly exhibited before transmission to England, and that a copy of the collection should be retained in the Library of the Legislative Council.

NEW BRIDGES.

Your Sub Committee recommend the vote of £1,585 3*s.* 10*d.* required under this head, as the works detailed in the Bill are desirable and of importance. This expenditure will be met from the unexpended balance of votes on the Supply Bill of 1870 for Public Works.

No. 11.—Miscellaneous Services.

TREASURER.

A further expenditure of £380 11*s.* 7*d.*, in connection with the Cattle Disease Commission, has to be provided for, which it is explained will be the final requirement on that account.

The Agents for the Western and Eastern Provinces ask for additional amounts for the keep of Mysore Bulls; the Agent for the North-Western Province requires £75 19*s.* for the payment of land purchased under writ against the Arrack renter of Puttalam; and in the Eastern Province a sum of £50 is required for building a Flag-room at Trincomalee.

No. 17.—Colonial Store.

A sum of £2,000 is required for the purchase of Stores in the Island, the cost of which will be brought to account as Revenue, as they are issued to the several Departments.

£2,484 0*s.* 5*d.* is included under this head for the cost of Furniture imported for the Queen's House, Colombo, and the Pavilion, Kandy, in addition to £2,000 voted in the Supplementary Supply Bill for 1869. The Committee learn, on inquiry, that of this amount, the sum of £684 was expended by the Crown Agents in England in 1869, and was brought to account last year. The present vote may therefore be reduced by that amount. The remainder of the expenditure was found to be necessary when preparing for the visit of the Duke of Edinburgh; and not being foreseen when the estimates for the year were prepared, provision was not made for it in the Supply Bill of the year.

SUPPLEMENTARY SUPPLY BILL, 1870.

Report.

No. 20.—Refund of Duties, Drawbacks, &c.

The amount required by the Treasurer and Provincial Agents, amounting to £1,158 2*s.* 5*d.*, is for refund of Stamp Duties; of purchase-money of land sold in error; and of half improved value of lots of land sold.

No. 24.—Railway Services.

£1,161 17*s.* 7*d.* is asked for for altering the gradients near the 41st mile-stone. This item is met by a saving on the vote of £10,000 for additional accommodation.

Additional Schedule.

An additional Schedule of items has been submitted to the Sub-Committee by the Government, a copy of which is appended to this Report. The items in this Schedule which appear to the Sub-Committee to call for comment, are

No. 14.—£300 for upkeep of Gampola and Pérádeniya road. The Sub-Committee would observe that a supplementary charge for upkeep of a road is unusual.

No. 17.—£12,000 is asked for Stores from England. This is owing to an under-estimate in the Supply Bill of the year.

Council Chamber,
Colombo, 14th December, 1870.

Henry T. Irving,
J. Douglas,
G. Vane,
M. Coomara Swamy,
A. Wise,
D. Wilson.

SCHEDULE.

ADDITIONAL items to be inserted, increased, reduced, or omitted from the Bill.

	Fixed Establishment	Provisional and Temporary	Allowances.	Office Contingencies.	Other Services
His Excellency the Governor.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Contingencies.					
Clothing to Governor's Guard [to be inserted]		..	..	14 10 2	...
Agent, Western Province.					
Salaries					
Salary of the Mudaliyar of Kalutara and Pánaduré [to be inserted] ...	...	12 10 0	...	..	...
Postmaster-General.					
Eastern Province					
Salary of the Clerk of the Post Office at Batticaloa, for October, November and December, 1870, at £25 per annum [to be inserted]	...	6 5 0	...	..	..
The Service Tenures' Commissioner.					
Salary of the Service Tenures' Commissioner for February, 1870, at £500 per annum [to be inserted]	...	41 13 4	...	...	.
The Queen's Advocate					
Salaries.					
Salary of a Clerk for 6 months, from 1st July, 1870, at £120 per annum [to be omitted]	.	60 0 0	...	.	...
[The following to be inserted]					
Salary of Audit Clerk from 1st October to 31st December, 1870, at £12 10s. per mensem		37 10 0	...	..	...
Salary of Clerk of Judicial Statistics from 1st July to 30th September, 1870, at £10 per mensem	...	30 0 0	...	...	...
Do. do. do. from 1st November to 31st December, 1870, at £7 10s per mensem	..	15 0 0	...	...	...
		82 10 0			
Commissioner of Requests and Police Magistrate, Balapitumódara.					
Contingencies.					
For the purchase of Furniture, £5 [to be omitted]	..	.	.	5 0 0	...
Commissioner of Requests and Police Magistrate, Kayts.					
Salaries.					
Salary of the late Chief Clerk for the month of November, 1868, [to be omitted] ...	5 16 8	...	...		...
Fiscal, Eastern Province.					
Salaries.					
Difference of salary to the Native Writer at Batticaloa, to make up his salary to £40 per annum [to be inserted] . .	.	8 6 8	...	...	...
Inspector-General of Police.					
Allowances.					
Batta to the Forces at the new Stations at Lunugala, Udu Pussellawa, Haldummulla [to be inserted]	...	..	100 0 0	..	..
No. 3.—Revenue Services.					
Agent, Central Province.					
Grain.					
Commutation expenses, being 1-20th share to Headmen collecting Tax [£200 to be increased to £350]	..	...	...	..	150 0 0
No. 8.—Hospitals (*exclusive of Establishments*).					
Agent, Southern Province.					
Provisions and other necessaries [£100 to be increased to £145]	...	...	..	.	45 0 0

SUPPLEMENTARY SUPPLY BILL, 1870.

Schedule

	Fixed Establishment.	Provisional and Temporary.	Allowances.	Office Contingencies.	Other Services.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
No. 10.—Rent					
Treasurer					
Rent of the southern half of the Chartered Mercantile Bank, situated in Queen's Street in the Fort of Colombo, occupied by the Department of the Registrar-General for the month of December, 1870, at £250 per annum [to be inserted]	...	...	...	...	20 16 8
Inspector-General of Police					
Rent of Station Houses and Barracks [to be inserted]	..	...	...	...	100 0 0
No. 11.—Transport.					
Transfer of vote for travelling expenses of the Service Tenures' Commissioner, &c., [after Agent, Eastern Province]	...	...	...	...	640 0 0
Vote of £695 11*s.* 3*d.* to District Judges, &c., [to be reduced to £107 9*s* 9*d.*]	...	...	...	...	588 1 6
Commissioner of Requests and Police Magistrate (additional) *Kurunegala.*					
Travelling expenses of Public Officers [to be inserted]	..	..	...	...	51 18 6
Fiscal, North-Western Province.					
Railway fare for conveying prisoners [to be inserted]	...	..	...	...	25 0 0
No. 12.—Conveyance of Mails.					
Postmaster-General.					
North-Western Province					
Hire of Contractor for conveying Mails from Karaitivu to Kalpitiya and *vice versâ*, from 1st September to 31st December, 1866, at 14*s.* per mensem [to be inserted]	..	...	...	...	2 16 0
No. 13.—Works and Buildings					
Director of Public Works.					
For repairs to Government Buildings and works, the cost of which shall not exceed £200 for each work [£300 to be increased to £550]	.	...	...	..	250 0 0
No. 14.—Roads, Streets, Bridges, and Canals.					
Director of Public Works					
Works to be undertaken under Road Ordinance.					
For the ordinary and necessary repairs	Days' Labour.				
The road from Puttalam to Maturankuli	1,250	.	..	...	..
The road from Jaffna to Káykésanturai	400	...	..	...	...
The road from Elephant Pass to Ampamam	2,800	...	..	...	...
The Yatawatta road between the North road and the boundary of the Kurunégala District	2,600	..	...	..	...
New undertakings (*other than Buildings*)					
Additions and improvements to existing Roads, the cost of which shall not exceed £200.					
Northern Province [To be inserted]	23,040	..	..	...	..
For the upkeep of the Road between Péradeniya and Gampola [to be inserted]		...	...	..	300 0 0
Claim of N. Ramen Chetty for Rice supplied [to be reduced to £416 0*s.* 11*d*]		...	...	..	225 17 5
To meet expenses on account of Photographs to be taken of the Principal Buildings, and of the various Races in this Island [£500 to be increased to £550 3*s* 6*d*]		...	...	..	50 3 6
To meet the claim of the Indian Government for Rations supplied to deserted Punjabees in 1867 and 1868 [to be inserted]		...	...	...	123 3 4
No. 15.—Miscellaneous Services.					
Treasurer					
To meet the claim of Her Majesty's Packet Agent for proportion of the value of Stamps on Overland Letters, &c., to be paid to the Post Office, London ...£900 0 0					
To pay the India Postal Department its proportion of the amalgamated rate of Postage to be charged on Letters forwarded to and received from India by the land route, £100 [to be inserted] ...£100 0 0					
£1000 0 0	..	...	..	...	1000 0 0

	Fixed Establishment	Provisional and Temporary.	Allowances.	Office Contingencies.	Other Services.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
No. 15.—Miscellaneous Services (*Continued*)					
Compensation to Mr. Cowasjie Eduljie for the loss sustained by him in the detention of his vessel "Saporjie Herjie," engaged by Government for the conveyance of Convicts to Malacca and Singapore in October 1865 ... ... £144 15 0					
Interest on £144 15*s.* 0*d.* from 10th August, 1869, to 5th December, 1870, at 9 per cent. per annum 17 4 7	...	...	...	...	161 19 7
Agent, Western Province.					
For enclosing four acres of Pasture land at the southern extremity of the Normal School premises in the Maradána Cinnamon Gardens, for the purpose of grazing and confining Cattle therein [to be inserted]	...	...	...	...	11 15 0
Agent, Southern Province.					
Amount due to Plaintiffs, being Judgment and Costs in Case No 26,779, District Court, Galle, decided against the Crown [to be inserted]	...	...	..	..	135 7 0
Agent, Eastern Province.					
For rebuilding a wall screening the figure of Buddha at the Gal Wiharain Polonnaruwa [to be inserted] ...	...	...	..	...	10 0 0
Agent, Central Province.					
For the keep of a Madras Bull from 23rd April, 1869, to 14th January, 1870 [to be inserted]	...	...	...	...	8 15 3
Crown Agents in London					
To meet loss on exchange on remittances to the Crown Agents [to be inserted] ...	...	.	...	..	2300 0 0
No. 17.—Colonial Store.					
Crown Agents in London.					
To meet payment of Tools, Stores, &c [to be inserted]	...	...	...	...	12000 0 0
No. 20.—Refund of Duties, Drawbacks, &c.					
Treasurer.					
Refund to the Municipal Council of Colombo the amount of Stamp duty paid on Certificates of Admission issued to Advocates and Proctors practising in Colombo, and on yearly Certificates to Proctors of the Supreme Court practising in Colombo, less 5 per cent. Commission [to be inserted] .	..	...	..	...	127 6 0
Refund to the Municipal Council of Colombo the amount of Stamp duty paid on Certificates issued by the District Judge of Colombo, from 1st September, 1866, to the end of December, 1867, to Proctors and Notaries practising within the Municipality [to be inserted]	...	...	...	..	56 11 6
Refund to the Municipal Council of Galle the amount of Stamp duty (less 5 per cent. Commission) paid on Proctors' and Notaries' Certificates issued during 1870; also on Proctors' and Notaries' Warrants and on Butchers' Licenses issued from July to December, 1869 [to be inserted]...	...	...	...	..	82 13 0
No. 24.—Railway Services.					
Chief Resident and Locomotive Engineer.					
Railway Extension.					
Survey for the proposed extension of the Railway from Péradeniya to Náwalapitiya [to be inserted]	...	...		...	400 0 0
No. 25.—Redemption of Dutch Credit Brieven.					
Treasurer.					
For the redemption of Dutch Credit Brieven and Cash Notes [£37 19*s.* to be increased to £109 14*s.* 2*d.*]	...	...	...	...	71 15 2

IX.

CUSTOMS' AMENDING ORDINANCE, 1869.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to Report upon the Bill, "An Ordinance to amend the Ordinance No. 17 of 1869."

Ordered by the Legislative Council to be Printed.

COLOMBO:
PRINTED BY WILLIAM SKEEN, GOVERNMENT PRINTER, CEYLON.

1870.

EXTRACT from the MINUTES of the LEGISLATIVE COUNCIL, held at the Council Chamber on Wednesday, 30th November, 1870.

"**Resolved.**—That the following Gentlemen be appointed a Sub-Committee to Report upon the Bill

'An Ordinance to amend the Ordinance No. 17 of 1869.'

"The Hon'ble R. F MORGAN, Queen's Advocate.
"The Hon'ble G. VANE, Treasurer,
"T. B. STEPHEN, Esquire, Collector of Customs.
"G. D. B. HARRISON, Esquire,
"A. WISE, Esquire,
"D. WILSON, Esquire,
} Unofficial Members."

CUSTOMS' AMENDING ORDINANCE.

REPORT.

THE Sub-Committee appointed to consider and report upon the Ordinance to amend the Customs Ordinance of 1869, agree with the Chamber of Commerce and the Managers of the three Banks, at whose application this enactment was introduced, in considering that the power to issue Warrants for goods deposited in Warehouses, corresponding with the Dock Warrants used in England, is calculated to be a great convenience to owners, importers, and consignees of goods, and to promote the interests of trade.

The Sub-Committee suggest the following amendments:

Section 1.—The requirement to issue Warrants should be in writing.

Section 3.– The Sub-Committee consider that the keeper of a Bonded Warehouse should not be allowed to issue Warrants for goods in which he is himself interested as owner, importer, or consignee.

Section 4.—The Sub-Committee recommend that the Stamp duty should be One shilling, and that the use on Warrants of adhesive stamps, expressly made for the purpose, be allowed.

Section 7.—The Sub-Committee consider that the punishment to be imposed on parties committing frauds as respects these Warrants, should be imprisonment in every case; and that the power to fine, at the discretion of the Judge, should be superadded thereto. According to the Draft Ordinance, the punishment may be fine or imprisonment.

Section 8.—It has been suggested by the Principal Collector of Customs that, instead of this section, new ones should be inserted, empowering Customs Officers to regulate the passage and traffic of vehicles within the premises, to do all acts necessary for the proper custody and preservation of goods, and to use proper precautions respecting combustibles and goods of dangerous quality. The Sub-Committee approve the suggestion, and recommend the insertion of new clauses, answering to the 6th, 26th, 27th, 28th, and 29th sections of the Wharf and Warehouse Act, No 26 of 1865.

Council Chamber,
Colombo, 21st December, 1870.

R. F. MORGAN,
G. VANE,
T. B. STEPHEN,
G. D. B. HARRISON,
A. WISE,
D. WILSON.

X.

SUPPLY BILL, 1871.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to Report upon the Bill, "An Ordinance for making provision for the Contingent Services of the year 1871."

Ordered by the Legislative Council to be Printed.

COLOMBO:
PRINTED BY WILLIAM SKEEN, GOVERNMENT PRINTER, CEYLON.

1871.

EXTRACT from the MINUTES of the LEGISLATIVE COUNCIL, held at the Council Chamber, on Wednesday the 16th day of November, 1870.

"Resolved.—That the following Gentlemen be appointed a Sub-Committee to Report upon the Bill:

'An Ordinance for making provision for the Contingent Services of the year 1871.'

"The Hon'ble H. T. IRVING, Colonial Secretary.

"The Hon'ble J. DOUGLAS, Auditor-General.

"C. P. LAYARD, Esquire, Government Agent, Western Province.

"G. D. B. HARRISON, Esquire,
"M. COOMARA SWAMY, Esquire,
"D. WILSON, Esquire,
} Unofficial Members."

SUPPLY BILL, 1871.

REPORT.

THE Sub-Committee appointed to consider the draft of an Ordinance for making provision for the Contingent Services of the year 1871, beg leave to present the following Report.

SCHEDULE A.

ESTABLISHMENTS.

No. I.—CIVIL.

COLONIAL SECRETARY.

Contingencies.

The Sub-Committee are glad to notice a vote for the establishment of a Páli, Sanskrit, and Singhalese Library.

TREASURY.

Allowances.

Under this head there is a decrease of £200, the allowance hitherto granted to the Superintendent of the Pearl Banks being discontinued. It is proposed that any necessary duties in connection with the Pearl Fishery should in future be performed by the Master Attendant of Colombo, on a reduced allowance of £50.

AUDIT OFFICE.

Contingencies.

There is an increase of £31 16*s.* 6*d.*, due principally to expenses incurred in binding Account books for use at the various Kachchéries.

PROVINCIAL AGENCIES.

WESTERN PROVINCE.

Salaries.

A sum of £100 is required for the salary of the Mudaliyar of Kalutara and Pánaduré, the last occupant of which Office was paid on the Retired list of Fisher Headmen.

Allowances.

There is a decrease of £158 8*s.*, being the allowance to the Dissáva of the Three Kóralés, which has lapsed in consequence of his death.

NORTH-WESTERN PROVINCE.

Salaries.

A vote of £48 is required for the salary of an extra Clerk at Kurunégala for six months, to bring up arrears of long-standing in the Office.

Contingencies.

There is a decrease of £40 under the head of Office furniture.

SOUTHERN PROVINCE.

Salaries.

There are two new items under this head, one of £60 for an additional Clerk at Mátara, and another of £24 for an additional Clerk for the Assessment Department at Galle.

SUPPLY BILL, 1871.

Report

NORTHERN PROVINCE.

Contingencies.

There is a slight increase under this head, owing to £10 being required for Service Telegraph messages, and £8 for the expenses of examining and putting the Thombo, or Land register, into order.

CENTRAL PROVINCE.—KANDY.

Salaries.

An additional extra Clerk is asked for at £100 a year, for bringing up arrears of twenty years' standing in the Deposit accounts.

PUBLIC WORKS' DEPARTMENT.

Salaries.

The increase of £90 is explained by a higher rate of pay being proposed for the four extra Draftsmen employed in this establishment.

Contingencies.

There is a decrease of £331, caused principally by smaller votes being submitted for clothing to Pioneers, allowance to Medical Officers, and expenses in connection with Hospitals.

SURVEY DEPARTMENT.

Contingencies.

A sum of £1,530 is asked for for next year, while that for the present year is £1,761 10s. The difference is mainly attributable to the purchase of surveying instruments, and to the construction and upkeep of meteorological sheds.

CUSTOMS DEPARTMENT.

HARBOUR DEPARTMENT.—COLOMBO.

Allowances.

As pointed out before, there appears under this head a new item of £50, being the allowance to the Master Attendant for the performance of duties in connection with the Pearl Fishery.

Contingencies.

For making two buoys, for marking the Isaure and Tartar rocks, a new vote of £80 is submitted.

GALLE.

Contingencies.

There is an increase of £20 for the purchase of buoys.

POST OFFICE.

WESTERN PROVINCE.—COLOMBO.

Salaries.

The employment of an extra Postman at £18 leads to a further outlay to that extent. There is an increase of £137 4s. 10*d.* in the votes for the ensuing year, owing to a larger vote being required for brown cartridge paper and envelopes, and for "small items connected with, or calculated to improve, the efficiency of the Tappal service."

SOUTHERN PROVINCE.—GALLE.

Salaries.

A vote of £60 is submitted for an additional Clerk, and another of £36 for two additional Peons. This is in consequence of the increased number of foreign mails received at this port

NORTHERN PROVINCE.

Salaries.

It is proposed to have a Post-holder at £18 at Vavoniya Vilánkulam, and another at £12 at Chávakachchéri.

Contingencies.

The price of wax-cloth, sealing-wax, twine, and oil, for making up packets at the Post Office, shews an increase of £25 for the next year.

CENTRAL PROVINCE.

Contingencies.

There is an increase of nearly £70, owing to a larger quantity of sealing wax being required.

SERVICE TENURES' COMMISSIONER.

The carrying out of the provisions of the "Service Tenures' Ordinance," enacted during the last Session, renders a new vote of £891 6*s.* necessary. For the same service during the current year, a vote for £674 17*s.* 7*d.* has been passed in the Supplementary Supply Bill.

The total estimates sanctioned for the Civil Establishments of 1870, were £164,049 16*s.* 2*d.*; those submitted for 1871 are £165,924 14*s.* 9*d.*—shewing an excess of £1,874 18*s* 7*d.*

II.—JUDICIAL.

QUEEN'S ADVOCATE'S DEPARTMENT.

Salaries.

There appear under this head two new items, viz. £150 for "Clerk of Audit," and £90 for "Clerk of Judicial Statistics." The Sub Committee have been informed, that these additional Clerks are required to enable the Queen's Advocate to supervise and check the Testamentary work of the District Courts, and to examine and report to the Governor upon the statistical returns which Judicial and Magisterial Officers render periodically. While all the members of the Sub-Committee admit the necessity for some supervision abstractedly, there is a difference of opinion amongst them as to the propriety of this supervision being exercised by the Queen's Advocate's Department. The Sub-Committee therefore submit these votes for the consideration of the Council.

DISTRICT COURTS.

The Sub-Committee notice, that in several District Courts at the out-stations provision is made for two Interpreters, one for the Sinhalese and another for the Tamil language. They are of opinion that these two offices might in some instances be amalgamated, and a person acquainted with the two languages made to fill both.

JAFFNA.

Contingencies.

Owing to a recent theft of the record of an important case, the District Judge has applied for a vote of £15 for the purchase of an iron safe.

KURUNÉGALA.

The additional Commissioner and Magistrate of this station, and his establishment, were discontinued on a recommendation of a Sub-Committee of this Council on the Supply Bill of 1869, who were of opinion that the business could be discharged by a single officer. But it has been represented to this Committee, that experience has not justified this supposition, and that the administration of justice in the North-Western Province, where cattle-stealing is prevalent to a very great extent, would materially suffer unless provision is made for the additional appointment.

FISCALS.

NORTH-WESTERN PROVINCE.—PUTTALAM.

Contingencies.

There is a decrease of £180 in the amount required for the purchase of furniture and tools.

NORTHERN PROVINCE.—JAFFNA.

Salaries.

The Sub-Committee are of opinion that there is no necessity for an Assistant Gaoler at £36 at Jaffna, but that, as in other stations, a Turnkey, at a reduced salary, should be provided for the Gaol there.

The total vote for Judicial Establishments for 1870 was £75,533 8*s.* 0*d.*, as against £75,812 0*s.* 2*d.* for 1871.

SUPPLY BILL, 1871.

Report.

IV.—PUBLIC INSTRUCTION.

The vote for this Department in 1870 was £15,240 16*s.* 0*d.*, as compared with £16,080 16*s.* 0*d.* for next year. An addition of two Clerks to the Office establishment is asked for, on the ground of the large correspondence thrown on the Office by the extension of the Grant-in-aid scheme, and the establishment of new Schools. The Committee however consider that the addition of one Clerk should be sufficient for the present: it is therefore recommended that the salary for the 6th Clerk be omitted.

There is also an increase of £896 16*s.*, under the head "Vernacular Schools, Male and Female," owing to the establishment of 41 new Schools.

V.—MEDICAL.

Salaries.

£90, the pay of the Inspector of Vaccination, will not be required, as the appointment is considered unnecessary. The duties of this Officer are now performed by a Colonial Surgeon, stationed at Colombo, who gets a horse allowance of £36 for the purpose.

Allowances.

For training up young men to the practice of medicine a sum of £200 is allowed to the American Mission; and, in connection with the new Medical School, an item of £297 appears as allowance to three Professors, at 5*s.* per diem. £76 5*s.* is also required for the purchase of furniture and other necessaries for this establishment.

VI.—POLICE.

There is an increase of £961 10*s.* 0*d.*, owing to the establishment of new stations, the appointment of additional Inspectors and Sergeants, and the creation of a new office, viz.: a Superintendent of Police, at £400. There is some difference of opinion amongst the members of the Sub-Committee as to the necessity of the last appointment, but the majority think that a qualified Superintendent should be appointed for Colombo and its vicinity, and that advantage may be taken of this opportunity to abolish an Inspectorship.

IX.—CEYLON GOVERNMENT RAILWAY.

TRAFFIC MANAGER.

The Sub-Committee observe a net decrease of £494 16*s.*, chiefly under the head Signallers and Coolies.

SERVICES, EXCLUSIVE OF ESTABLISHMENTS.

No. 2.—PENSIONS AND RETIRED ALLOWANCES.

In the aggregate, there is an increase of £88 6*s.* 7*d.*, but the total sum required for this purpose will admit of a small reduction, owing to the annuity to Mrs. Rodney having lapsed.

No. 3.—REVENUE SERVICES.

PROVINCIAL AGENCIES.

Salt.

The increase of £436 10*s.* under this head is owing principally to the large manufacture of Salt in the North-Western Province.

Grain.

There is a considerable increase under this head, £500 being required to pay the arrears of commission due to Headmen on Grain revenue in the Northern Province, whilst the payment of the salaries of Commuting Assessors in the Central Province, where a new Commutation is being carried on, necessitates a vote of £800.

No. 4.—ADMINISTRATION OF JUSTICE.

REGISTRAR OF THE SUPREME COURT.

The provision of £1,500 for the Circuit expenses exhibits a reduction of £500 on the vote for the current year. This is rendered possible, in view of the Supreme Court being able to avail itself of the Steamer shortly expected.

FISCAL FOR THE CENTRAL PROVINCE.

Witnesses' expenses for the next year shew an apparent increase of £400, as the provision for this purpose in the Budget of 1870 proved insufficient.

No. 6.—CHARITABLE ALLOWANCES.

Under this head the Sub-Committee notice that the amount asked for subsistence to Paupers is £100 less than the sum voted for the current year.

No. 7.—Education.

The sum asked for Grants-in-aid is less by £2,000 than that voted for the current year, which has not been fully spent. Fifteen additional Normal Students and two English Scholarships lead to an extra expenditure of £240. The votes for Books, Stationery, and repairs shew also an increase.

No. 8.—Hospitals.

The expenses connected with the new Hospitals at Negombo, Golahela, Gampola, Mátalé, and Badulla, contribute chiefly to the increase of £1,569 15*s*. 4*d*.

No. 9.—Police and Gaols.

FISCAL FOR NORTH-WESTERN PROVINCE.

There is an increase of £250 under this head for provisions for prisoners.

FISCAL FOR SOUTHERN PROVINCE.

The vote for the same purpose under this head has been increased to £3,000. The sum granted for 1870 having proved insufficient, was supplemented by a vote in the Supplementary Supply Bill.

FISCAL FOR NORTHERN PROVINCE.

There is a large increase in the vote for provisions for Prisoners, owing chiefly to the transfer from Colombo to Mannár of a large number of Prisoners for the purpose of constructing the Causeway there.

SUPERINTENDENT, COLOMBO CONVICT ESTABLISHMENTS.

Under this head the cost of provisions and other necessaries for Criminal Prisoners is in excess of the vote for the current year by £200.

On the whole, the Sub-Committee observe an increase of £2,249 5*s*. under the head "Police and Gaols."

No. 10.—Rent.

Though there is a considerable increase in the items appearing under this head in connection with the Registrar-General and the Inspector-General of Police, yet the total sum for this purpose is in excess of the amount voted for 1870 by only £15 14*s*.

No. 11.—Transport.

As, in accordance with the recommendation of the Sub-Committee on the Supply Bill for 1870, this subject is engaging the attention of a Committee appointed by His Excellency the Governor, your Sub-Committee have only to remark, that the entire sum asked for the year 1871 is less by £140 than the vote for 1870.

No. 12.—Conveyance of Mails

The vote submitted for the ensuing year is £10,399 8*s*. 2*d*., whilst the sum allowed for the current year was £9,559 3*s*. 6*d*. The difference of £840 1*s*. 8*d*. is due to large sums being required for the conveyance of Mails by Coach between different Stations, and also in some degree to the increased cost of Runners.

No. 13.—Works and Buildings.

DIRECTOR OF PUBLIC WORKS.

New Works and Buildings.

A sum of £6,000 is required for building new Hospitals. It is proposed to spend it in the following manner:—

Hendala Leper Hospital	£2,266
Mátara do.	2,018
Nuwara Eliya do.	511
Medical Officers' Quarters, Kandy	514
Do. do Mátalé . ..	131
Land for Hospital at Galle .. .	400
	£5,840

The old Shed of the Government Factory having been burnt down, a vote of £400 is submitted for building a permanent one.

SUPPLY BILL, 1871.

Report.

In order to enable the Inspector-General of Police to have Stations constructed at different places by men belonging to the Constabulary, it is represented that a sum of £500 is necessary. There is a difference of opinion amongst the members of the Sub-Committee as to the necessity for this vote, as will be seen from the division appended to this Report.

It is proposed to spend £1,000 on improvements connected with the Galle Harbour.

To meet the private contribution made before the Ordinance (No. 1 of 1845) on the subject was repealed, a Government moiety of £180 is asked for, as a grant-in-aid towards the construction of a Church at Puttalam.

The proposed improvements to the Council Chamber will necessitate an expenditure of £2,140. Of this there was last year voted £1,000; the balance of £1,140 is included in the estimates for the ensuing year.

Repairs to Buildings.

The usual vote, £8,000, "for repairs to Government buildings and works, the cost of which shall not exceed £200 for each work," is included in the estimates. The Sub-Committee recommend, that in future detailed statements of the expenditure incurred under this and similar votes granted in the lump sum, be submitted to the Legislative Council.

For the repairs to the Customs Jetties, Colombo, a vote of £1,747 is required.

On the whole, there is a decrease of £5,952 under the head "Works and Buildings."

No. 14.—ROADS, STREETS, BRIDGES, AND CANALS.

Roads.

The vote for the upkeep of roads is £12,273, which is £3,135 in excess of the sum (£38,[illegible]) granted for the current year. This is accounted for by the extension of roads in Uva and Sabaragamuwa. In 1870 however there were 2,523 miles of road requiring upkeep, whilst in 1871 there will be only 2,493½ miles. The difference is due to a part of the old Batticaloa road having been abandoned, in consequence of the construction of the new road to that district.

Canals.

There appears an increase of £150 in the total sum required for the upkeep of Canals in 1871.

The total sum required for upkeep this year, viz., £92,995, is larger (by £6,340 10s.) than the sum voted for the current year, viz., £86,654 10s.: this increase is spread over all the Provinces.

New Undertakings other than Buildings.

New Roads.—Railway Extension.

A vote of £25,000 is included in the Estimates, for Railway extension.

For the extension of the Badulla and Batticaloa road a vote of £25,000 is submitted. It is expected that the connection between Batticaloa and Badulla by this route will be completed early in 1872.

The extension of the Morowaka road, on an estimate of £9,084, necessitates a vote for the ensuing year of £6,000.

A sum of £300 is also asked for, as a contribution to the Provincial Road Committee of the Central Province, in aid of a Tavalam road to the Nitre Cave District.

Additions and Improvements to existing Roads.

The sum required for this purpose is £9,314, as against £19,260 voted for the current year, shewing thus a decrease of nearly £10,000. Amongst the items to be noticed are, a further sum of £5,000 for the improvement of the Ratnapura and Badulla road; £300 for gravelling the east and west base-line Borella, Colombo; £1,000 for the improvement of the Kégalla and Polgahawela road, on an estimate of £3,748. As regards the first vote, it is explained, that of the £9,947 voted last year for this work, there remains a balance of £1,500 unspent. It is expected that this surplus, added to the present vote of £5,000, will very nearly complete the metalling from Ratnapura to Navila.

Bridges.

Amongst the new bridges for 1871, the only one of any importance is the proposed work at Digarolla, at £2,000.

Irrigation Works.

The sum appropriated for this purpose is £30,000, exclusive of smaller votes for the upkeep of works already completed. Lists of the works proposed to be executed in 1871; and of those already executed or in course of construction, furnished by the Acting Director of Public Works, are annexed to this Report. The members of the Sub-Committee suggest that, in future, an Administration Report, having special reference to Irrigation Works, should be included in the Annual Report submitted to the Legislative Council.

Inland Navigation.

The sum required for this purpose is less, by £1,000, than that granted for the current year. There is however a large unexpended balance of the vote for 1870, which will be carried forward, in addition to the provision now made.

On the whole, the difference between the votes under this head for 1870 and 1871, is £14,330, the sums being, respectively, £216,158 and £230,488, and is mainly due to the money set apart as a contribution from the general revenue to the proposed extension of the Railway.

No. 15.—Miscellaneous Services.

Surveyor-General.

The Sub-Committee are informed that the sum asked for the survey of Temple lands, viz., £2,417, may be reduced to £900.

Provincial Agencies.

Agent, Eastern Province.

The Sub-Committee are glad to observe a vote "for collecting a quantity of seed of the Satinwood, Halmille, and Teak trees, with the view of establishing nurseries in the neighbourhood of Irrigation works, and of planting out the young saplings in the forests, when they have attained a sufficient size." The preservation of our forests, both by planting and by preventing the wanton destruction of the trees, is a subject of great importance, and deserves the best attention of the Council.

Agent, Northern Province.

Under this head there is an increase of £390 17*s.* 6*d.*, attributable chiefly to the expenditure to be incurred in the repair and upkeep of the Anurádhapura Waterworks, in filling up the swamp north of Navantorie, and in sanitary improvements in the vicinity of Mullaittívu.

Registrar-General.

The Census of the Island, proposed to take place in March next, will, the Sub-Committee are informed, cost £12,000. Of this sum, £7,000 is provided in the estimates for the next year.

No. 17.—Colonial Store.

The amount to be provided for the purchase of Stores is in excess by £11,850 of the vote for 1870. The increase is explained by the fact that the votes for the current year proved insufficient, and necessitated a further provision in the Supplemental Budget, to the extent of £12,000, under the head of Stationery, Tools, and other Stores from England.

No. 19.—Government Vessels.

The Steamer which is expected to arrive in Ceylon in April next, will cost £17,850, being £2,850 in excess of the cost originally anticipated. Of this sum, £10,000 was granted in the last Supply Bill, and in the present estimate £7,850 is set apart. In addition to this, there appears also a new vote of £5,000 for Crew, Coals, and Maintenance.

No. 21.—Lands taken for Government Purposes.

There is an increase of £135, chiefly under the heads, Agents, Central and Northern Provinces.

No. 22.—Immigration.

The vote for this purpose is £6,593 6*s.* 8*d.*, as against £6,213 4*s.* 4*d.* allowed for the current year. The increase consists principally in a larger outlay being required for vessels engaged in the conveyance of Immigrant Coolies between Mannár and India.

SUPPLY BILL, 1871.

Report.

No. 24.—Railway Services.

Repairs and Renewals.

There is an increase of £1,530, which is explained by £500 more being required for Engines and Tenders; £1,000 more for Carriages and Waggons; and also by larger expenses for "Maintenance beyond the Contract" for the next year.

Miscellaneous Services.

£10,375 is set apart for this purpose, being by £475 in excess of the vote for 1870. An increase in the estimated amount of traffic accounts for this difference.

The sum required for additional accommodation is £4,000, as against £10,000 for the current year.

In the total sums under this head, there is a decrease of £4,085; the amount for 1870 having been £115,392, and that asked for 1871 being £111,307.

The attention of the Council is invited to the Supplementary Schedule, which has been submitted to the Sub-Committee.

Council Chamber,
Colombo, 4th January, 1871.

Henry T. Irving,
J. Douglas,
C. P. Layard,
G. D. B. Harrison,
M. Coomara Swamy,
D. Wilson.

Division referred to.

"That the sum of £500 for Police Buildings stand part of the Bill."

Noes	*Ayes.*
Mr. Wilson.	Govt. Agent, Western Province.
Mr. Coomara Swamy.	Auditor-General.
	Colonial Secretary.

APPENDIX.

A.

ADDITIONAL ITEMS, not appearing in the Bill.

	Provisional and Temporary.	Allowances.	Office Contingencies.	Other Services.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Secretariat.				
Librarian of the Government Oriental Library [to be inserted] ..	50 0 0			
Allowances.				
Expenses to be incurred in the establishment of a Government Oriental Library [£200 to be increased to £600]	...	400 0 0		
Provincial Agencies.				
Agent, North-Western Province.				
Allowances.				
To Kambuwatawana Dissawe, to make up his salary to £200 per annum [to be inserted]	...	128 0 0		
Public Works' Department.				
Salaries.				
Superintendent of Irrigation Works ..	150 0 0			
Clerk to Irrigation Assistant [to be inserted]	120 0 0			
Customs, Northern Province.				
Office Contingencies.				
Additional sum required [to be inserted] ...	..	...	2 0 0	
Master Attendant, Galle.				
Contingencies.				
Incidental expenses, [vote of £20 to be increased to £25] . ... [to defray hire of boats for the Health Officer on inspecting vessels as they arrive in port]	...	..	5 0 0	
Post Office.				
Eastern Province.				
Salaries.				
Batticaloa.				
Clerk, Salary to be increased from £25 to £50.	25 0 0			
The Service Tenures' Commissioner.				
[The following items to be inserted.]				
1 Clerk and Translator	100 0 0			
1 Office Messenger	15 0 0			
1 Sweeper	12 0 0			
	127 0 0			
Royal Botanic Garden.				
Contingencies.				
Vote for Cabinets, Tables, &c., for the Herbarium [£50 to be increased to £100]	...	...	50 0 0	
District Courts.				
Mátara.				
Interpreter £60, to be transferred to the Court of Requests and Police Court of Mátara	60 0 0			
Commissioner of Requests and Police Magistrate at Jaffna.				
Contingencies.				
Pay of Bookbinders of the Jaffna and Mallakam Courts [to be inserted] ...	...	...	...	1 15 8
Courts of Requests and Police Courts.				
Kayts.				
Acting Commissioner of the Court of Requests and Police Magistrate, difference of salary to make up to £300 per annum [to be inserted]	125 0 0			

	Provisional and Temporary.	Allowances.	Office Contingencies.	Other Services.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Point Pedr.				
Acting Commissioner of the Court of Requests and Police Magistrate, difference of salary to make up to £300 per annum, [to be omitted]	125 0 0			
Fiscal, Northern Province.				
Jaffna. Salaries. 5 Gaol Peons at £12 each [to be inserted]	60 0 0			
3 — Ecclesiastical.				
Vote of £1,115 under the head of Provisional and Temporary to be transferred to the head of Allowances	...	1115 0 0		
Public Instruction.				
Director of Public Instruction Sixth Clerk [to be omitted]	36 0 0			
Director of Public Instruction. *Anglo-Vernacular Girls' School at Kurunegala* Kurunegala Sweeper [to be inserted] .. .	3 0 0			
Medical Inspector of Vaccination £90 [to be omitted]	90 0 0			
No 2 — Pensions				
Crown Agents in London. Pensions of Civil Servants. Annuity to Mrs Rodney, [£176 8s. to be omitted] £218 8s to be reduced to £42... Total £42,821 17s [to be reduced to £42,645 9s]		.	..	176 0 0
No 3 — Revenue Services.				
Agent, Western Province. Vote of £2,661 [to be reduced to £2,658]..	..	...	..	3 0 0
Agent, Northern Province. Commission to Headmen on Grain Revenue vote of £1,600 to be increased to £2,000 Total Vote £6,556 [to be increased to £6,956]	...	...	...	400 0 0
Assessment. *Agent, Southern Province.* Remuneration to Assessors, £20 [to be increased to £30] ...	.	..	...	10 0 0
Commission to Assessment Tax collectors, vote of £32 [to be increased to £47] ...			...	15 0 0
No. 7.—Education				
Vote of £5,543 10s. [to be increased to £5,613 11s 8d] .	.		.	70 1 8
No 6 — Charitable Allowance				
Agent, Northern Province. Vote of £500 [to be increased to £650.] ..		..	.	150 0 0
No. 9.- Police and Gaols.				
Superintendent, Colombo Convict Establishments. Materials for manufacturing articles by prisoners, vote of £600 [to be increased to £646 16s.] ...	.	...	..	46 16 0

	Provisional and Temporary.	Allowances.	Office Contingencies	Other Services.
	£ s. d.	£ s. d	£ s. d	£ s. d.
No. 10 —Rent				
Commissioner of Requests and Police Magistrate, Kandy.				
Allowance to Clerk of Court in lieu of House rent, vote of £24 [to be increased to £26]	.	.	..	2 0 0
Registrar-General				
Vote of £275 [to be increased to £525] ..	.	.	...	250 0 0
Director of Public Instruction.				
Rent of School Houses, &c., vote of £1,000 [to be increased to £1,080 17s. 8d] .	...	.		80 17 8
No. 11 —Transport				
Customs. Northern Province.				
Travelling Allowance and Batta to Officers, bringing Collections from out-ports, and batta for escorts, &c. [to be inserted] ...	.	...	. .	1 10 0
The Service Tenures' Commissioner				
Vote for travelling allowance to Public Officers [to be inserted after Postmaster-General] . .		..		840 0 0
Vote for travelling allowances to District Judges, &c. [to be reduced from £1,914 to £1 074]			...	840 0 0
Commissioner of Requests, &c , Mallakam.				
Travelling allowance to Public Officers, vote of £59 [to be increased to £65 11s 3d]	...		...	6 11 3
No 12 —Conveyance of Mails.				
Post Office.				
Postmaster-General.				
Vote of £10, 99 8s 2d. [to be increased to £10,566 12s. 5d]	.	..	...	167 4 3
No. 13 - Works and Buildings.				
Director of Public Works.				
For Police Buildings £500 [to be omitted]	.	...		500 0 0
No. 14.—Roads, Streets, Bridges, and Canals				
Director of Public Works.				
Works to be undertaken under the Road Ordinance Western Province.				
Roads				
Karawana Ella to Ginegathena, vote of £1,030 [to be reduced to £860] ...	...	..	...	170 0 0
Kotte road, vote of £200 [to be reduced to £130]		..	...	70 0 0
Urugodawatta road, vote of £325 [to be reduced to £250]	..	...	...	75 0 0
For the ordinary and necessary Repairs				
Vote for the Pundalu Oya road [to be increased from £477 to £502]	Days Labour ...	.	.	25 0 0
Vote for the Pupuressa road [to be increased from £595 to £610]...	...	. .		15 0 0
Vote for the Madulkelé to Bambra Ela [to be increased from £332 to £661]	.	...	..	332 0 0
Vote for the Lemastota road [to be increased from £400 to £540] ..	.	. .	..	140 0 0
Vote for the Deltota road [to be increased from £1,095 to £1,305].	...	...	.	210 0 0
Vote for the Badulla and Teldeniya road	3,600	. .	...	. . 229 0 0
Vote for the Badulla and Batticaloa road [to be reduced from £4,200 to £3,994]	8,400	..	...	. . 206 0 0
Vote for the Ampitiya and Talata Oya road [to be increased from £180 to £190] ...		..	.	.. 10 0 0
Vote for the Gonawatta through Kengalla to Rajawella road [to be increased from £420 to £525]		...	...	... 105 0 0

SUPPLY BILL, 1871.

Appendix.

	Days' Labour.	Provisional and Temporary. £ s. d.	Allowances. £ s. d.	Office Contingencies. £ s. d.	Other Services. £ s. d.
Vote for the Yattawatta road [to be increased from £50 to £100] ..	2,600	..	..	...	50 0 0
Vote for the Weeragantota to Mahawilla		...	...	...	23 0 0
Vote for the Naulla to Gurukandura [to be reduced from £4,813 to £3,973] ...		...	...	...	840 0 0
Additions and Improvements to existing Roads.					
Vote for the improvement of the Ratnapura, and Badulla road [to be reduced from £5,000 to £4,909.]		...	...	...	91 0 0
New undertakings other than Buildings					
Extension of Dimbula road, on an estimate for £7,146 (part Government moiety) [£1,500 to be reduced to £100]		...	...	..	1400 0 0
Dolosbage Grant-in-aid road [to be inserted]		...	...	..	100 0 0
New Bridges					
[In lieu of the reduction of £1,400 effected on the vote for the Dimbula road extension, the undermentioned works to be inserted]					
For building a Bridge over the Wellawaya at Ambalantota ..		..	...	...	656 0 0
For the approaches to the Bridge over the Bilahul Oya at Maturata ...		...	...	...	744 0 0
No. 15 — Miscellaneous Services.					
Agent, Western Province.					
For building a Cattle Shed on the paddock lately enclosed on the premises of the Normal Institution [to be inserted]		...	..	...	14 0 6
Director of Public Works.					
Remuneration to Utter Ling, late a Sepoy of the Pioneer Corps [to be inserted] ...		...	..	...	3 17 1
Surveyor-General.					
For the survey of Temple Lands, [£2,417 to be reduced to £900] .		...	...	...	1517 0 0
Treasurer.					
Vote of £6,650 [to be reduced to £200]					
Vote of £50 for relief of distressed Seamen, to be transferred to Collector of Customs, Colombo		...	..	...	50 0 0
Vote of £6,400 to be transferred to the Post Office, viz., amount due to Her Majesty's Packet Agent for proportion of the value of Stamps on Overland Letters, &c., to be paid to the Post Office, London ...		...	...	...	6000 0 0
To pay the Indian Postal Department its proportion of the amalgamated rate of Postage to be charged on Letters forwarded to and received from India by the land route		..	...	...	400 0 0
The Queen's Advocate.					
Remuneration to the Secretary to the Commissioners appointed to compile the Laws of Ceylon [to be inserted]		..	...	...	50 0 0
No. 16.—Interest.					
Vote of £221 7s. 6d. [to be reduced to £211 7s. 6d]		...	...	...	10 0 0
No. 20.—Refund of Duties, Drawbacks, &c.					
Agent, Western Province.					
Refund to P. Joseph Fernando, the sum of £41, being purchase-money and fees paid by him for an allotment of land, P. 315, at Kalutara, in extent 1 rood and 2 perches, the sale of which has been cancelled, [vote of £75 to be increased to £116] ..		...	...	...	41 0 0
Agent, Southern Province.					
Refund to Don A. S. Appuhami of Polwatta £2 5s, being profit on a re-sale of a Paddy rent, and to Don Nicholas of Matara £10, being amount realized by the sale of certain Paddy rents [to be inserted] .		..	...	...	12 5 0
Refund to D. Don Juanis, to T. Don Aberan Police Officer, and to L. Don Juanis, purchasers of two allotments of land, No. 3,524 and 3,525, situate in Bentota, Southern Province, £17 2s. 1d., the sale having been cancelled [to be inserted]		...	...	...	17 2 1

No. I.

RETURN OF IRRIGATION WORKS COMPLETED.

Seven Works, irrigating 4,090 acres. Cost, £4,762, or £1 3s. 3d. per acre. Annual Instalment, 2s. 4d.

TABLE shewing all Works constructed or repaired by the Government of Ceylon: the Amount expended on each: the number of Acres now cultivated by each; and the number of additional Acres capable of being brought under cultivation.

DISTRICT.	Name of Work.	Description of Work.	Date of Completion.	Cost to Government.	Value of id from Villagers in money or labor, if any	Number of Acres irrigated.	Additional Number of Acres capable of being irrigated	If work carried out under the recent Irrigation Scheme, Rate of Assessment per Acre.		REMARKS.
								s.	d.	
WESTERN PROVINCE.										
Salpiti Korálé ..	Boralesgamuwa, Mahawewa .	Rainwater tank .	1868 November	357 0 0	None.	300	None.	2	5	No new land to be brought under cultivation, but two crops per annum assured, instead of being precarious.
Sabaragamuwa ...	Kielpella Openayake	Aqueduct ..	1869. December ..	89 19 5½	,,	30	,,	6	0	Supply of water assured to old lands.
NORTH-WESTERN PROVINCE										
Puttalam . . .	Galkulam ..	Sluice	1869 November 27	42 19 10	—	55	5	1	7¼	—
EASTERN PROVINCE.										
Trincomalee	Periya Kulam ...	Floodwater tank . .	1869. October ..	1,016 12 6¼	—	517	350	2	4¼	In addition to this assessment, there will be that for the channels.
Do.	Allai Kulam ..	Do. .	1869. October ..	2,673 19 10¾	—	2124	—	2	6¼	—
SOUTHERN PROVINCE.										
Matara	Wankadawewa ...	Rainwater tank	1869. April ..	135 0 0	Villagers have executed the Earth-work.	560	500*	0	5¾	* But as these lands are irrigated from the Polwatta river, they did not join in this work. There is no waste land likely to be brought into cultivation under this tank.
CENTRAL PROVINCE										
Badulla . .	Alut Ella ...	Annicut and channels	1869 September	449 2 3½	—	150	None.	6	0	Remarks of the Assistant Government Agent, Mr. Sharpe:—"I can in no case give the exact extent in acres; I therefore give it in native measurement, with notes of the generally received opinion on the subject. The villagers by voluntary rate contributed 5,310 days' labour for earthwork and improvement of the wélla. The extent of land in the Alutwélla is, according to the present commutation assessment, 145 amunams, — pelas, and — lahas, or, in my opinion, at least 150 acres. "No additional land can be brought under the plough, but all the above range can be annually cultivated in future, whereas fully one-third has lain fallow hitherto each year for want of water. 93 amunams of the Pitawelle fields are also benefitted by the surplus water from the Alutwella range, and the owners, in consequence, contributed, at the rate of two days' labour for each pela, to the earthwork referred to above, although their lands were not considered fairly liable to be assessed for the work done by Government."

Public Works Department,
Colombo, 14th September, 1870.

(Signed) RALPH TATHAM,
for D. P. W.

C.

No. II.

IRRIGATION WORKS.

Sixteen Works, capable of irrigating 40,427 acres. Estimated Cost, £40,154, or 19s. 10d. per acre. Annual Instalment, 1s. 11¾d. per acre.

RETURN of Irrigation Works in progress, or sanctioned by Government, in Western, North-Western, Eastern, Southern, and Central Provinces.

DISTRICT.	Name of Work.	Description of Work.	Probable Date of Completion.	Probable Cost to Government.	Aid to be given by Villagers.	Number of Acres to be at once benefitted	Total Number of Acres likely to be ultimately cultivated	Proposed Rate of Repayment Instalment per Acre per Annum.	REMARKS.
WESTERN PROVINCE.			1870.	£ s. d.				s. d.	
Sabaragamuwa	Kinchugune Ela ...	Annicut and channel ..	June .	579 0 0	None	112	112	10 4	—
Do.	Walalgoda ...	Do. ...	Not yet commenced ...	796 15 0	...	400	400	2 11¾	Not yet commenced, there being no Superintending Officer yet available.
NORTH-WESTERN PROVINCE.									
Kurunégala	Kudugalpitiya ...	Annicut .. .	...	1,400 0 0	...	550	750	3 8¾	—
Puttalam	Tinipitiwewa ..	Tank	...	2,540 12 6	..	415	815	6 2½	—
Do.	Munesseram Ela	Channel and head sluice .	December ...	2,127 0 0	...	938¼	1,018	4 2	—
EASTERN PROVINCE.									
Trincomalee	Periya Kulam ...	Channels	June ..	162 0 0	...	517	867	0 4½	To be added to assessment on account of the tanks.
Do.	Allai Kulam ..	Do. and sluices ...	August ..	1,536 0 0	...	400	2,000	1 6¾	Do. do.
Batticaloa	Rugam Kulam ...	Tank	July ...	8,736 0 0	..	4,000	7,000	2 5¾	—
Do.	Kadukamunaivillu..	Do.	Not yet commenced ..	2,677 18 0	...	3,000	3,000	1 9	—
Do.	Seykappadidam Kurunikaykaidam . .	Annicuts	Do. ...	4,000 0 0	...	14,000	14,000	0 6¾	—
Do.	Divilane ..	Tank	Do. ..	3,500 0 0	...	1,500	3,000	2 4	—
SOUTHERN PROVINCE.									
Mátara	Denegamawewa Weyanwewa	Tanks	...	4,247 14 0	The channel to be executed by themselves	2,000	2,000	4 2¾	
Do.	Kekanadurewewa .	Do. and channel ..	...	5,500 0 0	...	2,100	2,800	3 11	The tank has been completed, except the gangway, which is left till the bund settles.

CENTRAL PROVINCE.											
Badulla ...	...	Buttala Ẹla ...	Channel and head-works ...	...	1,056 0 0	Two days' labor per man for every six days paid for.	727	793	5	3¼	Remarks of Mr. Sharpe, the Assistant Government Agent:—"Mr. Bailey calculated an acre in that district to be about 3 pẹ́las; the extent at once benefitted is assessed at 545 amunams, or 727 acres. "About 50 amunams more can be, it is thought, cultivated, but I doubt not much more will be eventually aswẹddumized, when the population increases, as it is sure to do. "The work done was simply earthwork, opening a new canal, 2,000 feet long, 3 feet wide, at bottom slope ½ to one; all this was done by native labor, at a cost of £553 0s. 7½d. But each man contributed two days free labor for improvement of the Ẹla for every term of six days paid for." The Buttala Ẹla carries water for about 150 acres.
Do. ...	...	Horaborawẹwa ...	Tank	April ...	695 0 0	...	389	1,500	3	6¾	"Present extent estimated at 292 amunams, or 389 acres, according to Mr. Bailey's calculation. I would say, in round numbers, 400 acres. "Mr. Molesworth thought any extent up to 3000 acres might be eventually aswẹddumized, as the district becomes settled and populated."
Do. ...	...	Kuḍáwẹwa ...	Do.	June ...	601 0 0	...	222	372	5	4¾	Remarks of Mr. Sharpe, the Assistant Government Agent. "The ranges of fields under the tank are assessed at 166 amunams, 1 pẹ́la, 1 laha, or, at the same calculation, 222 acres. "About 100 amunams, or 150 acres, more of forest might be, it is thought, asweddumized. "I believe that some more expenditure must be incurred to open the ẹla or canal from the sluice gate of the tank in the direction of the fields."
					40,154 19 6			40,427	0	0	

Public Works' Department,
Colombo, 14th September, 1870.

(Signed) RALPH TATHAM,
for D. P. W.

D.

LIST OF IRRIGATION WORKS

PROPOSED FOR CONSTRUCTION IN 1870.

	Amount of Estimate.	Proposed for Expenditure in 1870.	Total.
Eastern Province.			
Trincomalee.	£ s. d.	£ s. d.	£ s. d.
Periya Kulam Channel	162 16 0	.. 162 16 0	
Allai Do. do.	1,536 0 0	.. 1,536 0 0	
			1,698 16 0
Batticaloa.			
Kadukamunai Tank	2,677 17 10	.. 2,677 17 10	
Divilane Kulam	3,489 13 1	.. 2,000 0 0	
Kurune Cange Dam	500 0 0	.. 500 0 0	
Sengapaddai Dam	4,100 0 0	.. 600 0 0	
Rugam Kulam	370 0 0	.. 370 0 0	
			6,147 17 10
Southern Province.			
Denegama Tank and Meangwewa completion	3,897 14 0	.. 1,428 1 11½	
Kekenadura Tank completion	5,621 10 0	.. 3,144 6 6¾	
Wankadawewa, Borale	12 0 0	.. 12 0 0	
			4,584 8 6¼
North-Western Province.			
Deduru Oya Head Sluice and Channel ..	2,128 0 0	.. 2,128 0 0	
Tinipitiya Wewa	3,000 0 0	.. 1,800 0 0	
Kudugalpitiya Dam, Kospotu Oya ..	1,400 3 0	.. 1,400 3 0	
			5,328 3 0
Western Province.			
Kinchigune Channel completion ..	578 14 9	.. 433 3 9½	
			433 3 9½
Central Province.			
Horabora Wewa completion	695 0 0	.. 171 19 6	
Kuda Wewa do.	698 0 0	.. 498 0 0	
Butale Ela do.	759 0 0	.. 359 0 0	
			1,028 19 6
For construction of Sluices	63 0 0	.. 63 0 0	
Allowance to Superintending Officer and pay of a Clerk	119 7 1	.. 119 7 1	
Surveyor-General, for Surveys ..	370 0 0	.. 370 0 0	
Surveys and Traces by Public Works Department	182 19 8	.. 182 19 8	
			735 6 9
			£ 19,956 15 4½
Balance unappropriated		.. ..	43 4 7¼
		Total...	£20,000 0 0

MEMORANDUM

SHEWING APPROPRIATION OF IRRIGATION VOTE FOR 1870.

1.—*Periya Kulam, Nilaveli.* This estimate is for the construction of channels from the lately completed tank of Periya Kulam to the lands it is to water. The cost of the tank (which is to irrigate 517 acres of private and 350 acres of Crown land, part of which has already been sold) has been £1,016. It was originally intended that the people themselves should cut these channels, but they requested to have it done instead by Government. There is a large population, and the place is an important one.

2.—*Allai Kulam.* This present estimate is for the construction of a channel from the Allai Tank (lately completed) to a large tract of land at Mutur, Trincomalee. The tank itself cost £2,674, and the present estimate is £1,536, making a total of £4,210 for the irrigation of rather more than 4,000 acres of land, about 1,600 acres of which is Crown jungle.

Mutur is a very thriving Village with a large population. Allai Kulam has an area of 3,000 acres, with 7·6 of water at the sluices.

3.—*Kadukamunai Tank, Batticaloa.* A village tank on the Western shore of the Batticalon lake, near Ambalantorre. A large amount of land, about 3,000 acres, lies underneath it; the estimate amounts to £2,677 17*s.* 10*d.*

4.—*Divilane Kulam.* This is the restoration of a large tank, formed by bunding across a branch of the Navakiri Aru, Batticaloa, on which river the lands to be irrigated lie. This river falls into the Batticaloa lake at Porativu. There will be 1,500 acres to be benefitted at once, and ultimately at least 3,000 will be irrigated. The population is very large, and the land under the tank has been in great part sold, since it was determined to execute the repairs.

The total estimate is £3,489 13*s.* 1*d.*, of which it is proposed to ask £2,000 for this year.

5.—*Kuruna Cange Dam.* This is an annicut across the Kuruna Cange A'ru, one of the channels of irrigation from Ambárai tank. This tank supplies its water to the Morovil A'ru, which, some miles below it, divides into two, the Kuruna Cange and the Pattimpatti rivers. The bulk of the lands (14,000 acres in all) lie along the latter river, but its bed is on a higher level than that of the Kuruna Cange A'ru; consequently, the greatest part of the water goes down that river. This dam is for the proper regulation of the supply.

The estimate is £500, all of which it is proposed to spend this year.

6.—*Sengapaddai Dam.* This is an annicut across the Sengapaddai Aru, one of the main channels in the Irrigation District under Irakkamam and Ambárai tanks. It is one of the works necessary to complete the system of irrigation of the 22,000 acres under those tanks. The river in whose valley the lands lie, the Paddippalai Aru, divides into two branches just above Sengapaddai,—the Viriaddi and Sengapadda rivers. An annicut has been constructed across the former, and this present work is required to complete the regulation of the water flowing down the two branches. About 14,000 acres lie on the Sengapaddai, and 8,000 on the Viraddi.

The total estimate is £4,100, of which it is proposed to ask for £600 in 1870.

7.—*Rugam Kulam.* This estimate is for the completion of the Rugam tank by the construction of a spur to lead the surplus water from one of the spill-waters of the tank into the river. The bund runs along the southern bank of the Mundini A'ru, Batticaloa, for 110 chains, or 1⅜ miles, leaving a space at the upper end at spill level, in order that the river in flood might flow over and assist in filling the tank. But it is found, that the drainage into the back of the tank is so large, that water runs out over this spill after the river has fallen, and runs along the foot of the bund, doing great damage to it; the banks immediately at the river's edge being somewhat higher than the ground on which the bund is placed. This spur is to close this hollow, and to turn the surplus water straight to the river, a channel at spill level being cut through the high bank.

Rugam Kulam, now nearly finished, will cost £8,736, and will irrigate 7,000 acres of land, of which 3,000 acres is Crown jungle. The lands lie at and above Eraur, on the banks of the Mundini A'ru. There is a large population here.

8.—*Denegama Tank and Weangwewa.* This is an estimate of £1,428 1*s.* 11½*d.* to complete the works for the irrigation of the Hackmane Plain, Mátara, the total estimate being £3,897 14*s.* 0*d*, the remainder having already been expended. The Hackmane Plain, of very fertile soil, has suffered fearfully from drought of late years, and the district was becoming almost depopulated. A great improvement has however taken place in the condition of the people since the commencement of the works.

The total acreage to be benefitted will be 2,000 acres.

9.—*Kekanadura Tank, Mátara.* This is for the completion of the tank and channel in course of construction in the Allekande Valley, Kekenadura, for the irrigation of at least 2,800 acres in the Wellebodde Pattu, Mátara. Of these, 2,100 are private lands. This is a district which has also suffered much from drought. It is very populous.

The total estimate is £5,621 10*s.* 0*d.*, of which £3,144 6*s.* 6¾*d.*, to complete the work, is asked for in 1870.

10.—*Wankada Wewa, Borale.* This is a small estimate of £12 for a slight repair to the sluices of Wankadawewa, a tank just completed for the irrigation of 560 acres near Welegama, Mátara. The tank cost £135, exclusive of the earthwork, which was executed by the villagers themselves.

11.—*Channel from the Deduru Oya to the Chilaw Tanks* This is an estimate of £2,128 for the construction of a head sluice, and a channel 7 miles long, from the Deduru Oya to the Munesseram and other tanks at Chilaw, North-Western Province, for the benefit of 1,018 acres of land. The district is very populous, but the water supply has been lately very precarious.

12.—*Tinipitiya Wewa.* A tank filled from the flood waters of the Kadupitiya Oya, Mádampe, near Chilaw. The estimate amounts to £3,000, of which £1,800 is asked for this year. The acreage is 815, of which 400 are Crown jungle. The District is very populous.

13.—*Kudugalpitiya Dam.* This is an estimate, amounting to £1400 3*s.* 0*d.*, for the construction of an annicut across the Kospotu Oya, Kurunégala, for the irrigation of 550 acres of private land, and at least 200 acres of Crown jungle, lying on the banks of the stream. There is considerable population in the district, but the cultivation is very precarious.

14.—*Kinchiguna Dam and Channel.* An estimate of £433 3*s.* 9½*d.* for the completion of the works of the Kinchigune annicut and channel, near Belihul Oya, Sabaragamuwa, already commenced. The total estimate is £578 14*s.* 9*d.* The lands are in all 112 acres, which have not been cultivated for years.

15.—*Horabora Wewa* An estimate of £171 9*s.* 5*d.*, being the remainder of £695, the cost of repairing the Horabora Wewa, Alutnuwara. This magnificent tank at present only waters 389 acres, but is capable of irrigating about 3,000, which, with the exception of 389 acres now cultivated, is all Crown jungle. A sale of 100 acres has taken place since the commencement of the works.

16.—*Kudá Wewa, Alutnuwara.* This is an estimate for the repair of a small tank, formed by damming across a stream falling into the Mahawila ganga near Alutnuwara. The lands to be irrigated amount to 222 acres at present cultivated, and about 150 more of Crown jungle. The population is not large, but most anxious for the repair of the tank.

The total estimate is £698, of which £200 has already been expended.

17.—*Head works of the Buttale Ela.* These works consist of a masonry annicut and a head sluice, on the channel taking water from the Parepa Ela, a tributary to Kattugam river. The lands irrigated lie in the Butale Kóralé of Badulla, a wild district below Alipota. The channel itself was repaired in 1869, and since then the population has begun to increase, so that the cultivation has risen to 400 acres. It is expected, that in a few years 1,500 acres will be irrigated by this work.

The total estimate was £1,056, of which it is proposed to spend £359 this year, leaving £400 still for 1871.

18.—*Construction of Sluices.* A sum of £63 is inserted for the construction of irrigation sluices, in order to be able to have a supply always ready in store. As they are issued, they will be charged against the various estimates.

19.—Allowance to Superintendent of Irrigation, Eastern Province, and pay of *a Clerk.* It having been decided to place as far as possible the construction of these works in the hands of the Irrigation Assistant, the sum of £119 7*s.* 1*d.* is necessary for the additional staff required this year.

20.—A sum of £370 has been directed to be placed at the disposal of the Surveyor-General for the surveys of lands irrigated by the proposed works.

21.—A sum of £226 4*s.* 3¼*d.* is required for surveys of works approved of by the Irrigation Board, in order to prepare plans and estimates.

A. B. Fyers, Capt. R.E.
C. Woodward, Lieut. R.E.

M.

LIST OF IRRIGATION WORKS

PROPOSED FOR EXECUTION IN 1871.

Name of Work.	Total Amount of Estimate.	Proposed for Expenditure in 1871.	Total.
1.—Eastern Province.			
Trincomalee.	£	£	£
1. Maduwit Kulam Kumpurupiḍḍi	900	900	
			900
Batticaloa.			
1. Pulukanawa Kulam	3,500	3,000	
2. Sekamatu do.	3,500	3,000	
			6,000
2.—Southern Province.			
Mátara.			
1. Hallie Ḷla	4,037	3,000	
2. Elavela	2,500	2,500	
3. Annicuts at Sapugoḍa and Urapella ...	400	400	
			5,900
Hambantoṭa.			
1. Tissa Maha Ráma	10,459	3,000	
2. Uḍukiriwila	3,800	3,400	
3. Wirawila	300	300	
4. Palaṭupána	300	300	
			7,000
3.—North-Western Province.			
1. Wenoruwẹwa	750	750	
			750
4.—Western Province.			
1. Walalgoḍa Annicut	796	750	
2. Malwatta do.	564	564	
			1,314
Total, new work ...			£21,864
Required to complete unfinished work ...			6,590
Surveyor-General			1,270
Surveys and Traces by Public Works Department ...			300
		Total..	£30,024

MEMORANDUM

SHEWING APPROPRIATION OF IRRIGATION VOTE FOR 1871.

I.—Works in course of Construction.

1.—*Seṇkaṭpadai Dam, Batticaloa.* This is an annicut across the Seṇkaṭpadai A′ṛu, one of the main channels in the Irrigation District under Irakkámam and Ambárai tanks. It is one of the works necessary to complete the system of Irrigation of the 22,000 acres under those tanks. The river in whose valley the lands lie, the Paḍḍippalai A′ṛu, divides into two branches, just above Seṇkaṭpadai,—the Viráḍḍi and Seṇkaṭpadai rivers. An annicut has been constructed across the former, and this present work is required to complete the regulation of the water flowing down the two branches. About 14,000 acres lie on the Seṇkaṭpadai, and 8,000 on the Viráḍḍi.

The total estimate is £4,100, of which £600 was voted in 1870, leaving £3,500 for 1871. The cost is to be charged against the 14,000 acres depending on the annicut.

2.—*Divilane Kulam.* This is the restoration of a large tank, formed by bunding across a branch of the Navakiri A′ṛu, Batticaloa, on which river the lands to be irrigated lie. This river falls into the Batticaloa lake at Póratívu. There will be 1,500 acres to be benefitted at once, and ultimately at least 3,000 will be irrigated. The population is very large, and the land under the tank has been in great part sold, since it was determined to execute the repairs.

The total estimate is £3,489 13*s.* 1*d.*, of which £2,000 was voted this year, leaving £1,489 13*s.* 1*d.* for 1871. The yearly return to Government will be £348 19*s.*

3.—*Tenepitiya Wewa, Mádampe, near Chilaw* A tank, the repair of which was commenced this year, for the irrigation of 415 acres of land at present occasionally cultivated, and of 400 acres of Crown land, which will readily sell. The population is very large.

The estimate for the work is £3,000, of which £1,800 was voted this year, leaving £1,200 for 1871.

The amount to be repaid to Government will be £300 per annum.

4.—*Head-works, Butale Ela.* These works consist of a masonry annicut and a head sluice, on the channel taking water from the Parepa Ela, a tributary of the Kattugam river. The lands irrigated lie in the Butale Kóralé of Badulla, a wild district below Alipota. The channel itself was repaired in 1869, and since then the population has begun to increase, so that the cultivation has risen to 400 acres. It is expected that in a few years 1,500 acres will be irrigated by this work.

The total estimate was £1,056, of which £400 has been reserved for 1871. The yearly repayment on the close of the works will amount to £105 12*s.*

II.—New Works proposed for 1871.

1.—*Sekamatu Kulam.* This is the restoration of a large tank situated on the Talipat A'ṛu, Batticaloa, which falls into the sea at Tirukkóvil. The lands form a continuation of the Ambárai and Irakkámam tracts towards the south. At present 1,200 acres are cultivated, but the crops are very precarious, for want of water. In addition to these, about 1,200 acres of Crown jungle will be readily sold. There is a very large population just to the north of the tract, and Karuṇkoḍḍatívu, one of the largest villages in the Island, is only 12 miles away.

The estimate amounts to £3,711, of which it is proposed to spend £3,000 in 1871. The annual repayment will be £371 2*s.*

2.—*Pulukanawa Kulam.* This is the restoration of a large tank formed by damming across the Manapota A'ṛu, Batticaloa, a river falling into the Batticaloa lake between Póratívu and Korinkamunai. It will irrigate about 3,500 acres of private land, of which 1,500 acres have only recently been sold. In fact, application has been made for another 1,000 acres. There is a large population.

The estimate amounts to £3,857, of which it is proposed to ask for £3,000 in 1871. The annual return will be £385 14*s.*

3.—*Maduwit Kulam.* This is the repair of a tank for the irrigation of lands at Kumpurupiddi, about 13 miles north of Trincomalee, on the Coast road. About 125 acres of land are now cultivated, but the crop is precarious, owing to dearth of water; but, on the repair of the tank, about 500 acres will be cultivated. Of these, 375 are at present Crown jungle, but the people have offered to buy 300 acres as soon as the repair is commenced.

The present population is about 150 males. The village is an important one, being on the tappal road between Jaffna and Trincomalee.

The estimate amounts to £874, so that the yearly return will be £87 8*s.*

4.—*Hallie Ela.* This work consists in a store tank, which it is proposed to construct for the storage of water to supplement the Kirama stream, Mátara. This river at present does not contain enough water in the dry season for the irrigation of the fields on its banks, and great loss of crop is thereby yearly incurred. The tank will store the flood-waters of a small feeder of the Kirama, in order to let them out when the latter is low.

The district to be benefitted is very large, and population numerous, and the lands contain at least 5,000 acres.

The estimate is £4,037, of which it is proposed to ask for £3,000 in 1871. The yearly return will be £403 14*s.*

5.—*Elavela Tank.* This is a tank intended for the irrigation of a large tract of fields about 2,000 acres, in the Mátara District, on the road to Hackmena, at Kirinde, Batuwiṭa and Uḍua. It will also supplement the Kirama river, so that in all about 4,000 acres will be benefitted by the work. The tank will be formed by bunding across a small perennial stream, which, however, in floods brings down a large quantity of water.

The estimate for the work is £2,500, all of which it is proposed to ask for in 1871.

6.—*Sapugoda and Urapella Annicuts.* These works are to replace the present imperfect native dams of jungle sticks and clay, put up across Kirama river at those places. The river flows in a deep bed, and it is necessary to raise the water some 8 to 10 feet to get it on to the fields. With the present dams it is difficult to raise the water that height; much escapes through the works, and they are liable to destruction by floods.

The estimate, £400, will be charged against the 5,000 acres on the Kirama stream. The yearly return will be £40.

7.—*Tissa Maha Ráma, Hambantota.* This is the proposed restoration of the Tehewe tank, and the excavation of a channel, and its accessory works, from the Kirinde Oya. It is proposed, in the first instance, to take the channel to the Tammane A'ṛu, a small stream running into the Kirinde Oya, and which will carry enough water to fill the tank, and to serve for 600 acres of land, which is all that is anticipated will be brought into cultivation for the first few years after the repair of the works. This part of the work will cost £3,600, of which £3,000 is asked for in 1871.

The whole scheme will cost £10,459, and would provide water for the cultivation of about 15,000 acres of Crown land, now lying waste.

8.—*Uḍukiriwila.* This is the construction of a store tank on the Urubokka river, to supplement that river in the dry season, when it does not carry enough water for the irrigation of the fields on its banks. A channel of supply, with the necessary head-works, will be cut from the tank to a point on the river 2¾ miles above it, to carry the flood-waters into it.

There are about 5,000 acres to be benefitted by this work, the estimate for which is £3,800, of which it is proposed to ask for £3,400 in 1871. There is a very large population in the district.

9.—*Wira Wila.* This is the repair of a small village tank in the Mágam Pattu, between Tissa Maha Ráma and Hambantoṭa. The tank irrigates now about 100 acres, but its bund and sluices being very imperfect, the floods often do great damage to them. When repaired, probably an additional 50 to 100 acres will be brought into cultivation.

The population is small,—about 20 families. The estimate amounts to £300, so that the annual return will be £30.

10.—*Palaṭupána.* The repair of a village tank at Palaṭupána, Hambantoṭa. The bund is at present so out of repair that enough water for the cultivation of the fields cannot be secured, though in the floods ample water comes down to fill it. There are 75 acres at present under the tank, and probably 75 more of Crown land could be irrigated, if the bund were repaired: of these, 50 acres would be sold at once. The population is small,—about 30 families.

The estimate is £300, and the yearly return would be £30.

11.—*Wenoru Wewa.* This is the restoration of an old tank close to Kurunégala. The bund is breached, and there are no proper sluices or spill-waters. There are 400 acres of private land to be benefitted, and there is a large popalation.

The estimate is £750, the yearly return being £75.

12.—*Walalgoda Annicut.* A dam across the Hulanda Oya at Walalgoda, in the Kolonna Kóralé, Sabaragamuwa, and one of the largest villages in that Kóralé. The present native dam is very defective, and only gives enough water supply for 100 out of the 400 acres in the tract, and in which there is sufficient population to cultivate, were the water supply available.

The estimate is £796, and the yearly return would be £79 12*s.*

13.—*Malwatte Channel.* This is the repair of a channel carrying water from the Rakwána Oya for the irrigation of 150 acres of land at Malwatta, in the Aṭakalan Kóralé, Sabaragamuwa, now totally useless, on account of the channel being out of order. A landslip has occurred on it, completely destroying the water-course.

There is a large population in the district.

The estimate amounts to £564, so that the yearly return will be £56 8*s.*

III.—Sums required for Irrigation Surveys.

1. A sum of £1,270 has been directed to be appropriated for the Surveyor-General's Department, for the surveys of lands irrigated by the restored works.

2. A sum of £300 is necessary to make surveys of works approved of by the Irrigation Board, in order to prepare plans and estimates.

A. B. Fyers, Capt. R.E.
C. Woodward, Lieut. R.E.

XI.

PROPERTY AND TRUSTEES' BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to Report upon the Bill, "An Ordinance to amend the Law of Property and to relieve Trustees."

Ordered by the Legislative Council to be Printed.

COLOMBO:
PRINTED BY WILLIAM SKEEN, GOVERNMENT PRINTER, CEYLON.

1871.

EXTRACT from the MINUTES of the LEGISLATIVE COUNCIL, held at the Council Chamber on Wednesday, the 2nd November, 1870.

"Resolved.—That the following Gentlemen be appointed a Sub-Committee to Report upon the Bill:

'An Ordinance to amend the Law of Property and to relieve Trustees.'

"The Hon'ble H. T. IRVING, Colonial Secretary.
"The Hon'ble R. F. MORGAN, Queen's Advocate.
"The Hon'ble J. DOUGLAS, Auditor-General.
"M. COOMARA SWAMY, Esquire,
"J. A. MARTENSZ, Esquire,
"A WISE, Esquire,
} Unofficial Members."

"THE PROPERTY AND TRUSTEES' ORDINANCE, 1871."

REPORT.

THE Sub-Committee appointed to enquire into and report upon the Ordinance to amend the Law of Property and to relieve Trustees, beg to submit that the draft Ordinance is brought forward to cure certain defects in the law relating to Trustees which have been found by conveyancers for some time past to raise great practical difficulties in dealing with trust estates and preparing deeds in reference thereto.

The Judges have suggested the addition of certain new clauses, to enable District Courts to appoint trustees where, from failure in the provisions of the deed creating the original trust, or from other causes, such appointment becomes necessary. The Sub-Committee recommend the adoption of these clauses.

With the view to provide against applications to the Supreme Court for directions in cases which do not involve questions of sufficient doubt or difficulty, a contingency which the Judges apprehend, the Sub-Committee recommend that the applications should be signed by an Advocate of the Supreme Court, and that every applicant shall appear by Counsel. This will afford some guarantee that the Judges will not be troubled with applications unless in cases properly calling for their interference.

Council Chamber,
Colombo, 7th January, 1871.

HENRY T. IRVING,
R. F. MORGAN,
JOHN DOUGLAS,
M. COOMARA SWAMY,
J. A. MARTENSZ,
A. WISE.

XII.

GENERAL MORTGAGE BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to Report upon the Bill, "An Ordinance to amend in certain respects the Law of Mortgage and Hypothec."

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"M. COOMARA SWAMY, Esquire,
"J. A. MARTENSZ, Esquire,
"A WISE, Esquire,
} Unofficial Members."

GENERAL MORTGAGE BILL.

REPORT.

THE Sub-Committee have had this Bill under careful consideration, and they concur as to the desirableness of the objects which it is intended to promote. It is expedient that general mortgages should be put an end to, and that the right to pledge moveable property – all one's stock-in-trade for instance – the pledger remaining nevertheless in possession of such property, should be restrained, so as to afford protection to parties other than the pledgee dealing with him. It would be going too far to prohibit such transactions altogether, for cases may arise in which they may be perfectly legitimate and may promote the interests of trade. All that is wanted is to enable parties dealing with a person who may have pledged all his moveable property to another, to ascertain what his encumbrances are, so as not to be led away by the appearance merely which the ostensible possession of property gives him. This will, it is believed, be secured by requiring the registration of such transactions, where there is no delivery necessary to their validity. But having regard to the legitimate dealings of this character, which are now carried on by Merchants and Planters with the Banks—the hypothecation of produce awaiting shipment, for instance—and with a view to hamper commercial dealings as little as possible, the Sub-Committee recommend that the writings by which such transactions are to be effected, may be, as at present, by letters between the parties; they should however be registered in the Land Registry Office, where lists are to be kept of such pledges, to which the public may have ready access.

Several valuable suggestions have been made to the Sub-Committee for the amendment of the provisions introduced in the Draft Bill. To carry these out, the clauses have been considerably altered. The Queen's Advocate has conferred with the Judges of the Supreme Court, who reported on the original Bill, and these amendments have received their concurrence. On the other hand, the Judges suggested the adoption of a clause to remove doubts as to the question whether persons making advances for the cultivation, upkeep, or improvement of land, are entitled to any tacit hypothec in respect of such advances, which the Sub-Committee are not prepared to recommend, as they deem it unwise to deal in this Ordinance with one small branch of a very large subject—that of tacit hypothecs.

The principal objects of the amendments adopted are as follows:

(1.) To remove all doubt as to the provisions having a retrospective effect, which was never intended.

(2.) To render the registered instruments liable to the provisions of the Lands Registration Ordinance as respects Stamp duties and otherwise.

(3.) To exempt a large class of transactions which are common now among commercial men, and which are not objectionable on principle, from the operation of the Ordinance.

(4.) To avoid the danger of Bills of Sale being resorted to, as in England, to effect the pledge of moveable property without delivery of possession or registered writing.

(5.) To repeal the provision in the Police Ordinance, which required the presence of a Police Officer when pledges were to be effected.

Council Chamber,
Colombo, 7th January, 1871.

HENRY T. IRVING,
R. F. MORGAN,
JOHN DOUGLAS,
M. COOMARA SWAMY,
J. A. MARTENSZ,
ALFRED WISE.

XIII.

INSOLVENCY BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to Report upon the Bill, "An Ordinance to consolidate and amend the Law of Insolvency."

Ordered by the Legislative Council to be Printed.

COLOMBO:
PRINTED BY WILLIAM SKEEN, GOVERNMENT PRINTER, CEYLON.

1871.

EXTRACT from the MINUTES of the LEGISLATIVE COUNCIL, held at the Council Chamber on Wednesday, the 2nd November, 1870.

"Resolved.—That the following Gentlemen be appointed a Sub-Committee to Report upon the Bill:

'An Ordinance to consolidate and amend the Law of Insolvency.'

"The Hon'ble H. T. IRVING, Colonial Secretary.

"The Hon'ble R. F. MORGAN, Queen's Advocate.

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"A WISE, Esquire,
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INSOLVENCY BILL.

REPORT.

THE Sub-Committee appointed to report upon the Ordinance to amend and consolidate the laws relating to Insolvency, have given their careful consideration to the Bill, and, with the exception of one member, have agreed to a Report, adopting all the main principles of the measure.

The Judges of the Supreme Court, to whom the draft Ordinance was submitted, have also expressed their general approval of it in the following terms: "We are of opinion that the proposed Ordinance introduces most valuable reforms in that department of Law of which it treats, and is well calculated to remedy abuses which have arisen under the existing law. As we entirely approve of the principles upon which the Ordinance is framed, our remarks will be confined entirely to matters of detail and suggestions as to amendments of particular clauses; and it appears to us that there is little room for improvement, even in these minor details, considering the length of the proposed Ordinance."

The Sub-Committee moreover understand that legislation, based (like the present Ordinance) upon the English Bankruptcy and Fraudulent Debtors' Acts of 1869, has been introduced in India and in the Strait's Settlements. With this general concurrence of opinion as to the soundness of the principles of the Ordinance, the Sub Committee feel considerable reluctance to propose delay in its enactment. An application has however been submitted from the Chamber of Commerce to the Government, praying that the passing of the Bill may be deferred till next Session, to give the Chamber sufficient time to submit their views respecting it. The subject being one which principally concerns the Mercantile community, the Sub-Committee are unwilling to oppose such an application from a body which must be assumed to represent the commercial interests of the Island. The Sub-Committee therefore request that they may be empowered to continue their sittings after the close of the present Session, and trust that the Chamber of Commerce may enable them to avoid any long interruption of the labours they have already accomplished, by furnishing their views on the subject before the end of March.

Council Chamber,
Colombo, 7th January, 1871.

HENRY T. IRVING,
R. F. MORGAN,
JOHN DOUGLAS,
M. COOMARA SWAMY,
J. A. MARTENSZ,
ALFRED WISE.

XIV.

REPORT

OF

A COMMITTEE APPOINTED BY HIS EXCELLENCY THE GOVERNOR

TO CONSIDER THE SUBJECT

OF

TRAVELLING ALLOWANCES

TO

PUBLIC OFFICERS.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
PRINTED BY WILLIAM SKEEN, GOVERNMENT PRINTER,
CEYLON.

1871.

REPORT

ON

TRAVELLING ALLOWANCES.

MAY IT PLEASE YOUR EXCELLENCY,

THE Committee appointed by Your Excellency's Minute of 4th of June last, for the purpose of considering and reporting on the question of the Allowances to Public Officers travelling on duty, have held frequent meetings on the subject, and have been favoured with the assistance of several gentlemen of high standing and experience in the Colonial Service.

TRAVELLING ALLOWANCES.
Report.

As a preliminary observation, it appears necessary to remark, that one of the motives for an inquiry into the present system of travelling allowances appears to have arisen from a misconception of their cost to the Colony; it having been the custom, apparently without sufficient reason, to provide in the annual budget a sum larger, by several thousand pounds, than was necessary to meet the actual requirements of the various Departments. Thus, in 1869, out of a gross sum of £21,924 appearing in the estimates, £16,098 only was actually expended, the corresponding amounts for the preceding year having been £23,191 and £16,897, respectively.

The Committee need hardly point out, that such an over-provision is objectionable, as well on the ground of opening a door to an expenditure beyond the necessities of the Service, as on that of needlessly locking up a portion of the revenue, which might be advantageously appropriated to other branches of public expenditure.

It has not been shewn to the Committee that any serious abuses have been prevalent under the system hitherto in force, or that any substantial grievances have arisen under the existing scales of allowance. What is shewn to be required, is rather a re-adjustment of those scales, to meet new modes of travelling and other changes, than any sweeping or radical interference with the basis of the system.

The daily allowances now granted in the majority of cases, appear to have been intended to meet the joint expense of actual travelling and of subsistence on a journey, over and above that which would have been incurred by the Officer, had he been living in his own house. In those cases therefore, in which Officers travelling by Coach or Railway are allowed a reimbursement of the price of their tickets, or travel with a free pass, there is no occasion to allow more than a proportion of the daily rate sufficient to meet the extra cost of subsistence; such subsistence allowance should be confined to actual journeys,—*i. e.*, those necessitating the absence of the Officer from home for at least one night. Thus, for example, no subsistence allowance should be granted to an Officer going by Railway to Kandy in the morning, and returning in the afternoon,—his Railway fare only should be reimbursed to him.

On the other hand, it is but equitable that the Government should carry free of charge, not only the Officer himself, but also the horses, carriage, and other effects which he may be obliged to take with him by Railway for the purposes of an extended journey. The Committee therefore recommend, that an Officer making use of the Railway at the commencement of, or during, a journey on duty, should be entitled to the reimbursement of the fare paid for such carriage, horses, and servants not exceeding two in number, as he may take with him for the actual purposes of the journey.

INSPECTING OFFICERS.

There is a large class of Public Officers who travel on duty, not for the purpose of visiting the country through which they pass, but of inspecting various stations situated at a greater or less distance from each other. To this class the present daily allowance, which is irrespective of the distance travelled, does not seem in all respects suitable; for, while it is the interest of Government that the intermediate distance between these stations should be got over as quickly as possible, it is frequently to the pecuniary advantage of the

TRAVELLING ALLOWANCES. Report.

Officer to travel slowly. The more slowly, and probably on that account the more economically to himself, he travels, the larger is his allowance and the consequent charge on Government; while an Officer travelling with celerity would, in comparison, be doubly a loser, both as regards his expenses, and the amount of compensation he would draw to repay them.

For this reason the Committee recommend

That the Officers enumerated in Schedule A. be allowed, in lieu of a daily allowance as at present, a mileage rate for all journeys not performed by Railway or Coach; the rate to be 2*s.* per mile to Officers not in the receipt of separate horse allowance; 1*s.* 9*d.* to Officers receiving an allowance for one horse; 1*s.* 6*d.* to those receiving an allowance for two horses.

That on days of detention for inspecting purposes (but not for mere purposes of rest), a subsistence allowance at the rate of 15*s.* per diem be granted; such detention not to exceed three days at a time, unless with the special sanction of Your Excellency.

This subsistence allowance is recommended from the consideration, that an Officer stopping on a journey to inspect, incurs not only expenses of subsistence over and above that of his ordinary mode of life, but has to retain and pay, during such detention, for the carts, coolies, or other means of conveyance, which accompany him to carry his effects.

In the case of an Officer proceeding from Colombo to Galle, *or vice versâ*, as the commencement or end of a journey extending beyond Galle, the Committee recommend that he be allowed, in addition to the Coach fare, a sufficient sum—say £2 10*s.*—to cover the expense of sending on his horses and servants and carts to convey his effects.

Public Works' Department.

The Acting Director of Public Works has informed the Committee, that, in his opinion, the present scale of commuted allowance to certain Officers of that Department, is insufficient. Inasmuch, however, as the scheme was introduced by Mr. Molesworth, after much care and deliberation, barely twelve months ago, it is thought unadvisable to disturb it in that gentleman's absence, and before a fair opportunity has been afforded of judging of its success or failure. In the case of the other Officers of this Department (with the exception of the Director and the Irrigation Assistant, who are now classed in Schedule A.), the Committee consider the present scale of allowances adequate, and well suited to the requirements of the service to be performed.

Survey Department.

A petition has been received from the Assistant Surveyors of this Department, representing the insufficiency of their horse allowance; but, on the one hand, it has not been shewn with sufficient clearness to the Committee, that a horse is absolutely required in all cases; and, on the other hand, as a further allowance on a somewhat liberal scale is granted to Assistant Surveyors, when their travelling extends beyond a certain limit (for which the horse already allowed may of course be made available), the Committee are not prepared to recommend an increase in the one item without a corresponding decrease on the other; and they have therefore preferred to leave the scale of allowances of this Department untouched, except as regards the Surveyor-General, who, as will be seen, is now included under Schedule A.

Police.

Similarly, with the Police, it has been represented by the Inspector-General, that the rate of horse allowance to Inspectors is insufficient to meet the cost of the keep of a proper animal. But the Committee do not feel assured of the necessity or advisability of granting horse allowance at all to Officers, many of whom draw annual salaries of £80 or £100 only; and it has therefore been thought unadvisable to propose any change in a system of which the first principle appears still open to question.

Government Agents and their Assistants.

The Committee have had the advantage of receiving evidence on the allowances of the Government Agents, from the Agents of the Western and Central Provinces, and from the Assistant Agent, Ratnapura; and they are satisfied that the present scale of allowances is fairly sufficient, and best suited to the special circumstances under which Government Agents and their Assistants travel.

The duty of these Officers consists rather in a general supervision, than in a mere inspection of distinct localities. While, therefore, loss of time in unnecessary delays should undoubtedly not be encouraged, undue rapidity in travelling would equally defeat the intention of the Government, which is understood to be, that an Agent should be thoroughly acquainted with the people and the country included in his jurisdiction.

It appears however, doubtful to the Committee, how far, except under special circumstances, it can be advantageous to the welfare of a Province or District, that the Agent

should be too constantly absent from his Kachchéri. In some districts, more frequent supervision is required than in others, but the Committee are of opinion that it would be safe to adopt the Indian rule as the extreme limit to this class of travelling,—viz., that it should not extend over more than three months in the year. Under such exceptional circumstances as the preparation of a new Paddy Commutation, Service Tenure inquiries, or other special calls for the supervision of the Agent, permission should be asked for to exceed the proposed limit.

MEDICAL DEPARTMENT.

A representation has been made to the Committee by the Principal Civil Medical Officer on the subject of there being no rule at present for regulating the allowances to Medical Officers on removal from one station to another, or when detached on special duty. The Committee consider however, that owing to the varying nature of the expenses of removals, depending as they do on the localities, no fixed rate of allowance could be laid down, applicable with fairness to all cases, and that it would be therefore preferable to leave each of these cases, as well as those of detached duty, to be dealt with separately, as the circumstances of the case may render advisable.

SUPREME COURT.

On the question of the allowances payable to the Hon'ble the Judges of the Supreme Court, the Committee were favored with a conference with the Acting Chief Justice (the Chief Justice having been at the time absent on leave). They learned that the present scale was sanctioned by the late Sir Henry Ward, and was intended to represent, first, the expenses of travelling, and, secondly, a table money allowance, at the rate of £1 per diem.

Since the date at which this scale was fixed by Sir H. Ward, the conditions under which the Judges of the Supreme Court travel have been materially altered by the construction of the Railway to Kandy, and they will be still further modified by the establishment next year of a Government Steamer. Applying to the Judges the principles already recommended for adoption by the Committee, of distinguishing between cost of conveyance and cost of subsistence, and of defraying the actual expenses incurred by Railway, they beg leave to submit the following recommendations:

Central Circuit.

The Committee recommend, that in lieu of the present allowance, the Judge should receive his expenses by Railway in proceeding to hold the Circuit Court at Kandy and at Kurunégala, together with table allowance at the rate originally fixed by Sir H. Ward, viz., £1. per diem.

When it is found necessary to hold a Session at Badulla, the Committee would suggest that the Judge should receive a mileage allowance at the ordinary rate of 2*s.* a mile, as well as a daily subsistence allowance of £1 for the period of his absence on the Circuit.

Northern Circuit.

The Committee recommend that the Northern Circuit should be performed in the Colonial Steamer, table allowance of £1 per diem being granted to the Judges while on board, and during the continuance of the Session. Pending the arrival of the Steamer in Ceylon, the Committee propose that the present scale of allowance for the Northern Circuit should remain unaltered.

Southern Circuit.

The Circuit to Galle might be made in the Colonial Steamer, in which case the Judge would be entitled only to his passage and table allowance, as in the case of the Northern Circuit. If this be not practicable, the Judge would receive the same allowance as the other Principal Officers of Government for proceeding to Galle. For the journey to Tangalla, viâ Mátara, the Committee suggest the grant of an allowance, to be calculated on the same basis as that recommended for Badulla.

A similar allowance should be granted for the Chilaw Circuit.

As regards the Officers of the Supreme Court the Committee would recommend the scale of allowances provided in Schedule B; those for the Midland Circuit to take effect from the close of the year, and the remainder after the arrival of the Steamer.

This latter event (the arrival of the Steamer) will again, it is evident, very materially affect the travelling of the Inspecting Officers in Schedule A, and should, if convenient arrangements are adopted for its working, effect an important reduction, as well in the expense of the journeys as in the time for which the Officers are absent from Colombo. It is recommended that care should be taken that in all cases where the Steamer can be made available for the objects of the journey, it be compulsory on Public Officers travelling at the expense of Government, to take advantage of this means of conveyance, and the time of their journeys should be so arranged as to render this possible to its fullest extent.

TRAVELLING ALLOWANCES.

Report.

It is understood to be the intention of the Government to include in the passage tickets all charges for messing, exclusive of wine and other liquors. No allowance for subsistence appears therefore to the Committee necessary for the days wholly passed on board. In the case of Military Officers, for whom passage is provided in a Government Transport, an allowance is, it is true, granted for wine and beer; on the other hand, an abatement, according to the rank of the Officer, is made from his pay on account of his messing being provided for him. This system might also be adopted in the case of Civil Officers, but the proposal now submitted has the advantage of simplicity.

Subsistence allowance should of course be granted for any day passed on shore during the trip.

Before closing this Report, the Committee would venture to offer to Your Excellency two suggestions, on points connected with the subject.

In the case of an Officer about to start on a trip of inspection, the duration of which may be protracted over some considerable extent of time, it appears a hardship that he should be compelled to advance from his own pocket the whole of the expense which he is to incur during the period. In such cases the Committee would recommend that a moderate proportion—say one half—of the expense of the trip might be advanced on proper indent, the balance being recoverable in arrear in the usual manner.

And, secondly, the Committee are strongly impressed with a sense of the hardship entailed on the junior members of the Civil Service, by the fact of no allowance being made to them on the occasion of their transfer from one station to another. In cases of permanent or of substantial temporary promotion, the Committee would not consider that any allowance should be granted; but it is a matter of notoriety that many Officers become seriously involved from frequent changes of station; and the Committee do not think it fair that such charges should be imposed on Officers whose scale of remuneration is not sufficient to enable them to bear constant inroads on their income. Any allowance, if the recommendation be given effect to, should, in the opinion of the Committee, be limited to appointments not exceeding £600 a year.

HENRY T. IRVING,
JOHN DOUGLAS,
CHARLES P. LAYARD,
M. COOMARA SWAMY,
J. A. MARTENSZ,
D. WILSON.

SCHEDULE.

A.

Inspecting Officers.

Colonial Secretary.
Queen's Advocate, } not being on Circuit.
Deputy Queen's Advocate, }
Treasurer.
Auditor-General.
Surveyor-General.
Principal Collector of Customs, or his Deputy.
Collector of Customs, Galle.
Director of Public Works.
Irrigation Assistant.
Principal Assistant Colonial Secretary.
Director of Public Instruction.
Inspector of Schools.
Inspector of Prisons.
Principal Civil Medical Officer.
Inspector-General of Police.
Postmaster-General.
Inspector of Post Offices.
Registrar-General.
Superintendent, Botanic Garden.
Finance and Traffic Manager, Railway.
Railway Engineer.
Assistant Auditor-General.

2*s* per diem when not drawing horse allowance. To travel ten miles from their residences. Officers drawing allowance for one horse, to receive 1*s*. 9*d*. per mile, and to travel more than 15 miles from their residence. Officers drawing allowance for two horses, 1*s*. 6*d*. per mile above 30 miles from their residence. Subsistence allowance, 15*s* a day, for days of detention on duty.

B.

Proposed Supreme Court Allowances.

Queen's Advocate. Deputy Queen's Advocate. Registrar of Supreme Court.	Mileage at 2*s* per mile from Galle to Tangalla, and Kandy to Badulla, and Colombo to Chilaw. Subsistence allowance, 15*s*. a day, when not drawing the above or provided with free messing in the Steamer.
Deputy Registrars. Secretaries to Judges. Interpreters to Supreme Court.	1*s*. per mile, as above, and 10*s*. a day subsistence allowance.

C.

Officers whose Allowances are left as before.

Class I.—Government Agents, £1 10*s*. a day when travelling ten miles from their residences.

Class II.—District Judges, Assistant Government Agents, Assistants to Director of Public Works, Assistants to Surveyor-General, £1 per diem when travelling ten miles from their places of residence.

Class III.—Police Magistrates, Justices of the Peace, Coroners, and Deputy Coroners,—being Justices of the Peace, Superintendents of Vaccination, Assistant Collectors of Customs, Sinhalese and Tamil Interpreters to the Governor, 15*s*. per diem when travelling five miles from their residences.

Class IV.—(Drawing salaries and allowances of not less than £30 per annum.) Sub-Collectors of Customs, Secretaries of District Courts, Clerks, Interpreters and Translators of Public Offices, Storekeepers, Accountants and Mudaliyars, Muhandirams, and Principal Headmen, Shroffs and Assistant Shroffs, Draftsmen, Assistants, and Inspectors of the Police Department, 8*s*. per diem when travelling five miles from their residences.

No Native Headman will be entitled to this allowance, when travelling within his own Division.

Class V.—(Drawing salaries and allowances exceeding £12 and less than £30 a year.) Clerks, Translators, Muhandirams, and Native Headmen, Native Writers, Assistant Shroffs and Canicophes; 3*s*. per diem.

No Native Headman will be entitled to this allowance, when travelling within his own Division.

Class VI.—(Drawing salaries and allowances exceeding £9 and less than £12 per annum.) Head Messengers, Money Counters, Police Serjeants, Subordinate Headmen, 1*s*. 6*d*. per diem.

This allowance will not be paid to any Subordinate Headman, when travelling within his own Division.

Class VII.—Tide Waiters, Peons, Process Servers, Messengers, Police Constables. In the Central Province 1*s*.; in the other Provinces 9*d*. per diem.

XV.

CEYLON.

FINANCIAL STATEMENTS

LAID BEFORE THE LEGISLATIVE COUNCIL,

DURING THE SESSION OF 1870–71.

COLOMBO:
PRINTED BY WILLIAM SKEEN, GOVERNMENT PRINTER,
CEYLON.

1871.

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REVENUE.

	£	s.	d.	£	s.	d.
ARREARS OF REVENUE of former Years . . .	.	.	.	32632	8	0½
Revenue of the Current Year.						
CUSTOMS.						
Import [illegible] Rent and Sundries	235057	8	1			
[illegible]	57007	7	1			
				292064	15	2
PORT AND HARBOUR DUES.						
Port Clearances	5469	15	5			
Boats and Moorings	113	12	6			
Pilotage	1408	7	0			
				6991	14	11
LAND SALES.						
Waste Lands	38417	5	0¾			
Cinnamon Gardens, &c	2310	17	1			
				40728	2	1¾
LAND REVENUE.						
Paddy	89017	19	11¼			
Fine Grain &c	8420	12	8¼			
Gardens, &c	1014	17	8¼			
Tythes redeemed	113	11	9¼			
Rent of Lands	339	18	7			
Royalty on Plumbago &c . dug in Government Lands . .	1617	18	0¼			
Toonthaul Lands	3	11	0			
				100528	9	8½
RENT, EXCLUSIVE OF LANDS.						
Toll on Bridges Canals, &c.	32353	7	7½			
Government Buildings and Houses	1864	16	6			
Rent of Civil Government Quarters	110	16	8			
				34329	0	9½
LICENSES.						
Arrack, Rum, and Toddy	129386	0	2			
Stills	692	0	0			
Wholesale dealers in Arrack and Rum	418	13	4			
Retail of other Spirits	180	0	0			
Chanks	460	8	6			
Fire Arms	299	9	6			
Opium	32	0	0			
Carriers	3099	9	0			
Boat Licenses	129	18	0			
Palanquin Carriages	22	0	0			
Butchers	44	10	0			
Marriage	120	0	0			
				134884	8	6
STAMPS.						
Judicial and Blank	59935	1	4			
Postage	13071	19	0½			
Composition duty on Bank Notes	2688	0	3			
				75695	0	7½
TAXES.						
Immoveable property within Towns	.	.	.	3716	17	2
POSTAGE.						
On Public and Private Letters	.	.	.	2433	8	2
FINES AND FORFEITURES.						
Supreme Court, District Courts, Courts of Requests, and Police Courts	5738	5	0½			
Government Agents, &c.	1405	8	8			
				7143	13	8½
Carried forward .	.	.	.	731147	18	10½

EXPENDITURE.

Civil Establishments.	Salaries. Fixed. £	s.	d.	Salaries. Provisional. £	s.	d.	Allowances. £	s.	d.	Contingencies. £	s.	d.	Total. £	s.	d.
CIVIL ESTABLISHMENT.															
The Governor	7131	8	0	81	8	0	0	0	0	8	12	0	7524	8	0
Colonial Secretary	9308	5	7½	2711	3	7	0	0	0	2000	15	9	14020	4	11½
Treasurer	3453	13	2	68	19	2	650	5	8¾	222	3	11	4395	1	11¾
Auditor General	3117	5	0	165	0	0	0	0	0	197	7	8	3779	12	8
Director of Public Works	8071	0	7	21785	12	11	0	0	0	3133	4	2¾	32992	17	8¾
Surveyor General	6708	14	8	11522	13	10	75	0	0	1687	16	8	19994	5	2
Botanic Garden	734	7	0	735	1	1	0	0	0	59	11	1	1529	2	5
Loan Board	324	0	0	306	0	0	0	0	0	34	11	0	664	11	0
CUSTOMS.															
Western Province	5707	17	11	1166	0	8	0	0	0	287	2	0	7161	0	7
Southern Province	2324	13	4	279	14	0	0	0	0	146	4	1	2750	11	5
Eastern Province (including Master Attd.)	629	0	0	790	11	2	0	0	0	351	4	5	1770	15	7
Northern Province	1911	16	9	153	2	4	0	0	0	54	12	9	2119	11	10
MASTERS ATTENDANT.															
Colombo	661	10	0	667	10	0	0	0	0	287	5	4	1556	5	4
Galle	549	0	0	1131	0	0	0	0	0	328	12	11	2008	12	11
POST OFFICES	4469	9	11	4027	3	3	9	0	0	1517	19	10¼	10023	13	0¾
AGENTS OF PROVINCES.															
Western Province	7866	12	5½	1776	14	8	270	16	0	353	0	6½	10267	3	8
North-Western do.	5609	19	0	1083	17	6¾	30	0	0	45	18	6¼	6769	15	1½
Southern do	6761	7	1	460	8	0	31	10	0	123	3	2	7376	8	3
Eastern do.	5149	14	2	78	10	0	0	0	0	89	6	10½	5317	11	0½
Northern do.	7512	5	8½	171	3	0	0	0	0	203	14	10½	7887	3	7
Central do.	8210	7	8	348	11	5	0	0	0	305	12	11	8864	12	0
JUDICIAL ESTABLISHMENTS.															
Supreme Court, Chief Justice and 1st and 2nd Puisne Justices	6646	13	4	0	0	0	0	0	0	0	0	0	6646	13	4
Queen's Advocate, Deputy Queen's Advocate, and Deputies to the Queen's Advocate	4369	0	0	736	12	0	0	0	0	16	2	8	5121	14	8
Registrar, Supreme Court	1768	10	8	343	12	0	0	0	0	20	14	6	2132	17	2
DISTRICT COURTS, POLICE COURTS, & COURTS OF REQUESTS.															
Colombo	4237	16	9	183	16	0	0	0	0	78	6	0	4499	18	9
Pénadure	532	0	0	0	0	0	0	0	0	20	2	0	552	2	0
Kalutara	1341	0	0	15	0	0	0	0	0	7	2	6	1363	2	6
Ratnapura	783	0	0	252	0	0	0	0	0	18	13	3	1053	13	3
Negombo	1010	13	4	36	0	0	0	0	0	2	15	0	1049	8	4
Kégalla	287	1	3½	704	0	0	0	0	0	9	14	0	1000	15	3½
Avisáwélla and Passala	571	0	0	81	0	0	0	0	0	38	16	0	693	16	0
Chilaw	884	0	0	0	0	0	0	0	0	0	0	0	884	0	0
Puttalam	0	0	0	234	0	0	0	0	0	4	3	7½	238	3	7½
Kalpitiya	581	0	0	10	12	4	0	0	0	1	8	4½	596	0	8½
Kurunégala	1349	0	0	301	10	7¾	0	0	0	9	19	9	1663	10	4¾
Balaputtimódata	594	2	6	80	13	7	0	0	0	1	3	6	675	19	7
Galle	2876	15	0	0	0	0	0	0	0	19	8	1	2896	3	1
Matara	1291	0	0	414	0	0	0	0	0	17	18	10	1722	18	10
Tangalla	904	0	0	0	0	0	0	0	0	11	0	0	915	0	0
Hambantota	582	0	0	0	0	0	0	0	0	0	6	0	582	6	0
Carried forward	127133	0	11	53496	1	5½	1066	11	8¾	11665	17	8¼	193361	11	10

REVENUE.—(*continued.*)

	£	s.	d.	£	s.	d.
Brought forward				731147	18	10¾
SALE OF GOVERNMENT PROPERTY.						
Salt	73412	2	7			
Arrack and Rum	6007	19	8			
Timber	7307	10	11			
Weights and Measures	369	5	11			
Sundries	222	9	9			
Stores	50750	10	4½			
Unserviceable Stores	801	18	3½			
				138871	17	5½
REIMBURSEMENTS, &c.						
Hospital Stoppages	82	2	5¾			
Government *Gazettes*, &c.	407	6	2			
School Fees, Books &c	2876	15	11			
Survey Fees recovered	6081	6	2			
Maintenance of Prisoners in Gaols, and dieting Patients in Hospitals	1085	12	1½			
Recovered value of Tools lost	284	5	5½			
Value of Prison Labour	1299	8	5½			
Passage-money of Immigrant Coolies	1683	12	0			
Collections at the General Cemetery	93	13	0			
Sundries	1586	9	7			
Assessment Tax under the Ordinance No. 16 of 1865	114	10	8			
Expenses incurred on account of the Police at Colombo, Galle and Kandy recovered from the Municipalities	8442	19	10			
				24038	1	10½
ELECTRIC TELEGRAPH				8907	13	7½
MISCELLANEOUS RECEIPTS.						
Repayment for difference of Troops	14583	6	8			
Over-payments recovered and Incidental Receipts	11122	18	3½			
Subscription to Widows' Fund	24	14	5			
Poundage on Wills	15	14	0			
				25746	13	4½
INTEREST.						
On Moneys lent by the Loan Board	1485	7	0			
On Arrears of Revenue	3125	5	9			
On Investments in Indian Government Securities	11972	18	6			
				16583	11	3
PEARL FISHERY						
Sale of Rent Trincomalee				36	2	0
SPECIAL RECEIPTS.						
Fees for Title Deeds	756	17	0¼			
Fees for Invention Ordinance	3	10	0			
Fees for issuing Thombo Extracts	1	5	6			
Incidental	1	4	6			
				762	17	0¼
RECEIPTS BY THE CROWN AGENTS IN LONDON						
Subscription to the Widows' Fund	270	0	0			
Incidental Receipts, and Interest	130	2	10			
				400	2	10
Carried forward				946494	18	3¾

EXPENDITURE,—(*continued.*)

	Salaries. Fixed. £	s.	d.	Salaries. Provisional. £	s.	d	Allowances. £	s.	d.	Office Contingencies. £	s.	d.	Total. £	s.	d.
Brought forward	127133	0	11	53496	1	5½	1066	11	8¾	11665	17	8¾	193361	11	10
DISTRICT COURTS, POLICE COURTS & COURTS OF REQUESTS.—*Continued.*															
Jaffna (*Northern Province*)	2101	12	7	116	0	0	0	0	0	21	16	4	2239	8	11
Point Pedro (*Northern Province*)	471	10	10	135	8	4	0	0	0	11	0	0	617	19	2
Chávakacchéri (*Northern Province*)	512	0	0	0	0	0	0	0	0	12	0	0	524	0	0
Kaits (*Northern Province*)	519	8	6	0	0	0	0	0	0	4	7	6	523	16	0
Mullaitivu (*Northern Province*)	382	0	0	170	0	0	0	0	0	5	13	4½	557	13	4½
Mallákam (*Northern Province*)	0	0	0	80	0	0	0	0	0	12	6	3	92	6	3
Mannár (*Northern Province*)	669	0	0	0	0	0	0	0	0	6	7	9	675	7	9
Nuwarakaláwiya (*Northern Province*)	655	10	3½	0	0	0	0	0	0	2	7	6	657	17	9½
Trincomalee (*Eastern Province*)	1300	13	4	4	10	0	0	0	0	5	0	0	1310	3	4
Batticaloa (*Eastern Province*)	964	16	8	95	5	0	0	0	0	19	13	6	1079	15	2
Kandy (*Central Province*)	3090	9	4	40	4	0	0	0	0	21	4	9	3151	18	1
Badulla (*Central Province*)	1129	12	0	0	0	0	0	0	0	3	6	0	1132	18	0
Mátalé (*Central Province*)	463	12	0	12	0	0	0	0	0	2	12	4	478	4	4
Gampola (*Central Province*)	644	0	0	36	0	0	0	0	0	0	0	0	680	0	0
Dumbulla (*Central Province*)	625	15	10	75	0	0	0	0	0	0	0	0	700	15	10
Nuwara Eliya (*Central Province*)	349	13	9	75	0	0	0	0	0	9	14	0	434	7	9
Pusselláwa (*Central Province*)	0	0	0	80	0	0	0	0	0	0	0	0	80	0	0
Hárispattu (*Central Province*)	606	0	0	0	0	0	0	0	0	3	5	0	609	5	0
Náwalapitiya (*Central Province*)	0	0	0	55	0	0	0	0	0	0	0	0	55	0	0
Haputalé (*Central Province*)	0	0	0	534	10	0	0	0	0	0	0	0	531	10	0
Dumbara (*Central Province*)	0	0	0	661	16	0	0	0	0	3	3	0	664	17	0
ECCLESIASTICAL ESTABLISHMENT.															
Episcopal and Presbyterian Church Establishment	8423	4	8	330	11	4	1151	1	3¼	0	0	0	9904	17	3¼
EDUCATION ESTABLISHMENT.	3245	6	8	11025	3	11	0	0	0	0	0	0	14270	10	7
MEDICAL ESTABLISHMENT	6661	1	7	6807	7	6	55	0	0	2495	0	3	16018	9	4
FISCALS IN THE PROVINCES.															
Western	2671	15	2	2743	17	3	0	0	0	70	3	1	5485	15	6
North-Western	878	3	3	388	11	1	0	0	0	53	7	7	1320	1	11
Southern	1815	0	0	688	10	7	0	0	0	167	0	6	2670	11	1
Eastern	632	16	8	75	9	0	0	0	0	21	18	1	730	3	9
Northern	1369	7	4	528	5	5	0	0	0	64	19	7	1962	12	4
Central	1757	1	3	1289	13	2	0	0	0	29	18	1	3376	12	6
Commissioner of Temple Lands	0	0	0	214	0	0	0	0	0	0	0	0	214	0	0
Inspector-General of Police	1728	1	4	24585	11	0	460	19	1	70	17	6	26845	11	11
Colonial Storekeeper	0	0	0	2636	16	3	0	0	0	0	0	0	2636	16	3
Registrar-General of Lands, &c.	0	0	0	6927	13	9	3278	12	6	562	16	7	10769	2	10
Inspector-General of Prisons	0	0	0	1069	0	0	0	0	0	8	14	9	1077	14	9
Agents General in London	0	0	0	525	0	0	0	0	0	0	0	0	525	0	0
	170800	16	11½	115802	5	0½	6012	4	7	15354	9	0½	307969	15	7½

REVENUE,—(*continued.*)

	£	s.	d.
Brought forward	946494	18	3¾
Carried forward	946494	18	3¾

EXPENDITURE,—(*continued.*)

Services exclusive of Establishments.	£	s.	d.	£	s.	d.	Total. £	s.	d.
PENSIONS AND RETIRED ALLOWANCES. *Brought forward*	.	.	.	.	.	.	307969	15	7½
Amount paid in the Colony	10555	0	2¼						
do. in England	24089	14	4						
do. in India	5815	13	1½						
				40460	7	7¾			
REVENUE SERVICES.									
Government Agent, Western Province	2931	2	0½						
do. North-Western do.	7675	18	4½						
do. Southern do.	1646	1	5¼						
do. Eastern do.	1479	6	5						
do. Northern do.	4712	2	0¾						
do. Central do.	1389	14	10						
				19834	5	2¼			
ADMINISTRATION OF JUSTICE.									
Queen's Advocate	15	10	0						
Supreme Court	1617	10	2						
District and Police Courts	250	15	0½						
Government Agents	94	10	9						
Fiscals of the Provinces	2822	6	4						
				4800	12	8½			
ECCLESIASTICAL.									
In aid of Missions	.	.	.	400	0	0			
CHARITABLE ALLOWANCES.									
Subsistence to Paupers, Expenses of the Colombo Orphan Asylum and Military Orphan Boys, &c., Donation to Friend-in-Need Society and Public Libraries									
Government Agent, Western Province	1909	19	8						
do. North-Western do.	114	8	3						
do. Southern do.	716	10	0						
do. Eastern do.	313	7	9						
do. Northern do.	481	0	6						
do. Central do.	320	19	3						
				3856	5	5			
EDUCATION.									
In the Colony	2555	14	10½						
Government and Agents in India	142	12	11						
				2698	7	9½			
HOSPITALS.									
Government Agent, Western Province	5175	15	4½						
do. North-Western do.	600	16	9						
do. Southern do.	494	0	6						
do. Eastern do.	180	16	2						
do. Northern do.	347	13	5						
do Central do.	3586	12	1						
Inspector-General of Police	50	0	0						
				10735	14	3½			
POLICE AND GAOLS.									
Fiscal, Western Province	5935	1	9						
do. North-Western do.	1171	11	11						
do. Southern do.	3672	2	5						
do. Eastern do.	500	3	11						
do. Northern do.	606	4	7¼						
do. Central do.	3979	5	5						
Inspector General of Police	224	18	11						
District Judges and Police Magistrates	23	11	6						
Agents of Provinces	106	15	4½						
Bengal Government	6459	7	1½						
				22679	2	11½			
RENT.									
Treasurer	39	5	0						
Director of Public Works	223	10	0						
Customs	22	10	0						
Agents of Provinces	116	16	8						
District and Police Courts	27	15	0						
Inspector-General of Police	665	3	0						
Principal Civil Medical Officer and Inspector-General of Hospitals	36	0	0						
Fiscals of the Provinces	99	15	0						
Registrar-General of Lands	290	15	0						
Postmaster-General	190	13	0						
Inspector-General of Prisons	15	0	0						
				1727	2	8			
TRANSPORT.									
The Governor	650	19	7						
Colonial Secretary	299	13	1						
Treasurer	1798	2	1						
Auditor-General	35	0	2						
Director of Public Works	4568	14	0						
Surveyor-General	1132	12	10						
Officers of Customs	153	4	7						
Postmaster-General	158	4	3						
Queen's Advocate	33	10	2						
District Judges, Police Magistrates, and Justices of the Peace	633	13	8						
Principal Civil Medical Officer and Inspector-General of Hospitals	427	4	8						
Inspector-General of Police	1573	19	1						
Superintendent, Botanic Garden	141	8	1						
Director, Public Instruction	430	10	3						
Registrar-General of Lands	157	2	6						
Inspector-General of Prisons	175	7	6						
	12369	6	6						
Carried forward...	...			107191	18	2¾	307969	15	7½

REVENUE,—(*continued.*)

	£ s. d.
Brought forward . £	946494 18 3¾
TOTAL . .	946494 18 3¾

EXPENDITURE,—(*continued.*)

Services exclusive of Establishments.

	£	s.	d.	£	s.	d.	£	s.	d.
Brought forward...	12369	6	6	107191	18	2¾	307969	15	7½
Agents of Provinces, Assistant Agents, &c., including Medical Officers on Vaccination and Small-Pox duties.									
Western Province 627 16 11½									
North-Western do. . . . 430 17 9									
Southern do. . . . 594 17 0									
Eastern do. . . . 470 16 3									
Northern do. . . . 816 16 8									
Central do. . . . 564 2 9									
	3505	7	4½						
FISCALS OF PROVINCES.									
Western Province 65 11 5									
North-Western do. . . . 33 15 3									
Southern do. . . . 0 0 0									
Eastern do. . . . 60 6 0									
Northern do. . . . 49 1 0									
Central do. . . . 14 18 0									
	223	11	8						
				16098	5	6½			
CONVEYANCE OF MAILS	.	.	.	8107	1	3			
WORKS AND BUILDINGS.									
Civil Works	10540	11	5½						
ROADS, STREETS AND BRIDGES	123237	11	7¾						
				133778	3	1			
MISCELLANEOUS.									
Customs	28	2	1						
Treasurer	5289	8	4						
Director, Public Works	13175	2	3½						
Surveyor-General	4651	9	1						
Inspector-General of Police	5877	6	3						
Agents of Provinces	2316	0	11½						
Government and Agents in India	369	14	8¼						
Agents in London	3005	15	3						
				31712	18	11			
INTEREST.									
Treasurer and Crown Agents	.	.	.	272	14	1			
COLONIAL STORE									
Expenditure in the Colony	12063	11	9						
do. by the Agents in India	3133	5	4½						
do. do. in London	25421	5	3						
				40618	2	4½			
CONTRIBUTION TOWARDS MILITARY EXPENDITURE . .	.	.	.	160000	0	0			
COLONIAL PAY AND ALLOWANCES.									
Aid-de-camp to His Excellency the Governor	284	1	0						
Mounted Orderlies	267	7	6						
				551	8	6			
REFUND OF DUTIES, DRAWBACKS, &c.	.	.	.	1531	8	5¾			
LANDS TAKEN FOR GOVERNMENT PURPOSES	.	.	.	608	6	6			
IMMIGRATION	.	.	.	5595	13	4½			
RAILWAY LIABILITIES	.	.	.	63094	6	8			
ENQUIRY INTO THE CULTIVATION OF THE PEARL OYSTER . .	.	.	.	1210	0	0			
							573403	6	11¾
							881373	2	7¼
Excess of Revenue over Expenditure . . .							65121	15	8½
TOTAL £— . . .							946491	18	3¾

	Roads			Works.		
	£	s.	d.	£	s.	d.
*Sums charged on Balances . . .	20438	15	4½	27267	14	1¾
Do. Surplus funds . . .	31725	0	6¾	—		
TOTAL—	£52163	15	11¼	27267	14	1¾

Audit Office,
Colombo, 16th May, 1870.

JOHN DOUGLAS,
Auditor-General.

COMPARATIVE STATEMENT OF THE REVENUE OF CEYLON FOR THE YEARS 1868 AND 1869.

	Revenue of 1868.	Revenue of 1869.	Increase in 1869.	Decrease in 1869.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1.—ARREARS OF REVENUE of former years -	31675 19 10¾	32632 8 0¼	956 8 1½	—
2.—CUSTOMS.				
Imports, &c. - - -	221313 19 4	235057 8 1	13743 8 9	—
Exports - - -	61530 7 2	57007 7 1	—	4523 0 1
3.—PORT AND HARBOUR DUES.				
Port Clearances - -	5701 0 2	5469 15 5	—	231 4 9
Boats and Moorings - -	205 7 6	113 12 6	—	91 15 0
Pilotage - - -	1590 0 0	1408 7 0	—	181 13 0
4.—LAND SALES.				
Waste Lands - -	25462 10 8½	38417 5 0¾	12954 14 4¼	—
Cinnamon Gardens - -	3389 12 7	2310 17 1	—	1078 15 6
5.—LAND REVENUE.				
Paddy - - -	77226 5 3	89017 19 11¼	11791 14 8¼	—
Fire Farm - - -	7714 8 2¼	8420 12 8¼	706 4 5¼	—
Gardens - - -	922 3 11	1014 17 8¼	92 13 9¼	—
Tythes redeemed - -	154 8 4	113 11 9½	—	40 16 6½
Rent of Lands - -	218 11 1¼	339 18 7	121 7 5¾	—
Royalty on Plumbago, &c. -	1310 10 3½	1617 18 0¼	307 7 8¾	—
Toonhand Lands - -	0 18 0	3 11 0	2 13 0	—
6.—RENTS, EXCLUSIVE OF LANDS				
Tolls, Bridges, Canals, &c. -	33078 2 2	32353 7 7½	—	724 14 6½
Government Buildings and Houses -	1638 9 1½	1864 16 6	226 7 4½	—
Rent of Civil Government Quarters -	68 3 0	110 16 8	42 13 8	—
7.—LICENCES				
Arrack, Rum, and Toddy - -	129983 10 11	129386 0 2	—	597 10 9
Stills - - -	1416 0 0	692 0 0	—	724 0 0
Wholesale dealers in Arrack and Rum -	132 0 0	418 13 4	286 13 4	—
Retail of Salt - -	3864 13 3	—	—	3864 13 3
Chanks - - -	335 16 4	460 8 6	124 12 2	—
Fire Arms - - -	315 16 0	299 9 6	—	16 6 6
Retail of other Spirits - -	106 0 0	180 0 0	74 0 0	—
Retail of Opium - -	16 0 0	32 0 0	16 0 0	—
Carriers - - -	3017 5 0	3099 9 0	82 4 0	—
Boat Licenses, &c. - -	139 10 0	129 18 0	—	9 12 0
Palanquin Carriages - -	22 0 0	22 0 0	—	—
Gunpowder - - -	1 0 0	—	—	1 0 0
Butchers - - -	16 10 0	44 10 0	28 0 0	—
Marriages - - -	232 5 6	120 0 0	—	112 5 6
8.—STAMPS.				
Judicial and Blank - -	58568 9 5½	59935 1 4	1366 11 10½	—
Postage - - -	12120 1 1¼	13071 19 0½	951 17 11¼	—
Composition duty on Bank Notes -	2500 0 0	2688 0 3	188 0 3	—
9.—TAXES				
Immoveable property within Towns -	3740 14 6¼	3716 17 2	—	23 17 4¼
10.—POSTAGE.				
Public and Private letters - -	2790 18 7	2433 8 2	—	357 10 5
11.—FINES AND FORFEITURES.				
Supreme Court, District Courts, Courts of Requests, and Police Courts -	5838 15 1¾	5738 5 0¼	—	100 10 1½
Government Agents, &c. - -	440 9 10	1405 8 8	964 18 10	—
Carried forward ...	698798 12 5	731147 18 10¾	45028 11 9½	12679 5 8¾

	Revenue of 1868	Revenue of 1869	Increase in 1869.	Decrease in 1869.
	£ s. d.	£ s. d	£ s. d	£ s. d.
Brought forward £...	698798 12 5	731147 18 10¾	45028 11 9½	12679 5 3¾
12.—SALE OF GOVERNMENT PROPERTY.				
Salt	62838 2 10	73412 2 7	10573 19 9	—
Arrack and Rum	49 9 0½	6007 19 8	5958 10 7½	—
Timber	5172 12 1¼	7307 10 11	2134 18 9¾	—
Weights and Measures	348 13 8	369 5 11	20 12 3	—
Colonial Stores, &c.	63417 14 6¼	50750 10 4¼	—	12667 4 2
Unserviceable Stores	4898 16 11½	801 18 3¼	—	4096 18 8¼
Sundries	223 4 11	222 9 9	—	0 15 2
Sale of Delft Horses	69 5 0	—	—	69 5 0
13.—REIMBURSEMENTS, &c.				
Hospital Stoppages	121 17 9¼	82 2 5¾	—	39 15 3½
Government Gazettes, &c.	449 17 5	407 6 2	—	42 11 3
School Fees, Books, &c.	3198 9 10½	2876 15 11	—	321 13 11½
Surveyor's fees recovered	4741 11 0¾	6081 6 2	1339 15 1¼	—
Maintenance of Prisoners in Gaols and dieting Patients in Hospitals	1025 12 10	1085 12 1½	59 19 3½	—
Recovered value of Tools lost	143 9 7¼	284 5 5½	140 15 10¼	—
Value of Prison Labour	1404 10 4¾	1299 8 5½	—	105 1 11¼
Collections at the General Cemetery	68 2 6	93 13 0	25 10 6	—
Passage Money of Immigrant Coolies	1571 10 0	1683 12 0	112 2 0	—
Sundries	1590 9 11	1586 9 7	—	4 0 4
Assessment Tax under the Ordinance No. 16 of 1865	127 18 5½	114 10 8	—	13 7 9½
Expenses incurred on account of the Police at Colombo, Galle, and Kandy recoverable from the Municipalities	9854 15 4	8442 19 10	—	1411 15 6
14.—MISCELLANEOUS.				
Overpayments recovered, &c.	18602 0 8½	11122 18 3½	—	7479 2 5
Subscription to Widows' Pension Fund	21 14 5	24 14 5	—	—
Incidental Receipts	—	—	—	—
Discount on Bank Bills	121 5 9¾	—	—	121 5 9¾
Poundage on Writs	30 6 11	15 14 0	—	14 12 11
Repayment for deficiency of Troops	16100 0 0	14583 6 8	—	1516 13 4
15.—INTEREST.				
On moneys lent by the Loan Board	1310 14 1	1485 7 0	174 12 11	—
On Arrears of Revenue	2416 14 5¼	3125 5 9	708 11 3¼	—
On Indian Investments	13176 6 6	11972 18 6	—	1203 8 0
16.—ELECTRIC TELEGRAPH.	11699 17 5	8907 13 7½	—	2792 3 9½
17.—PEARL FISHERY.	81 11 8	36 2 0	—	48 9 8
18.—SPECIAL RECEIPTS				
Fees for Title Deeds	581 4 11¾	756 17 0¼	175 12 0½	—
Do. for issuing Thombo Extracts	5 7 0	1 5 6	—	4 1 6
Registration Fee under the Invention Ordinance	1 15 0	3 10 0	1 15 0	—
Incidental Receipts	0 1 0	1 4 6	1 3 6	—
RECEIPTS BY THE CROWN AGENTS.				
Subscription to the Widows' Fund	271 1 4	270 0 0	—	1 1 4
Incidental Receipts, &c.	74 18 1	130 2 10	55 4 9	—
GOVERNMENT VESSELS.				
Freight and Passage money	650 0 0	—	—	650 0 0
	925265 16 0¼	946494 18 3¼	66511 15 5½	45282 13 2
		Deduct Decrease £	45282 13 2	
		Net Increase..£	21229 2 3½	

Audit Office,
Colombo, 25th May, 1870.

JOHN DOUGLAS,
Auditor-General.

REMARKS 1869.

No. 1. ARREARS OF REVENUE.—This increase is owing to a larger amount of Revenue outstanding having been recovered in 1869 than in the previous year.

„ 2. CUSTOMS.—The increase of £13,743 8*s.* 9*d.* on Imports, &c., has been caused by an increased importation under nearly all heads, but particularly those of Cotton Manufactures, Spirits and Wine.

The decrease on Exports was chiefly in Coffee and Cocoanut Oil. There can be little doubt that the prospective abolition of the Export duties led to a postponement of the Shipment of the above articles of Ceylon produce towards the close of the year.

„ 3. PORT AND HARBOUR DUES.—This decrease is attributable to less tonnage being employed in 1869, than in the previous year.

„ 4. LAND SALES.—The increase under the head "Waste Lands" is owing to a large sale of lands in 1869, principally in the Western Province, while the decrease under the head "Cinnamon Gardens" arose from a smaller number of Building Lots having been disposed of in that year.

„ 5. LAND REVENUE.—The increase on account of "Paddy" and Fine Grain" is owing to a more productive harvest in 1869, and also to the introduction of the commutation system in the Kégalla and Batticaloa Districts.

The increase on account of "Royalty on Plumbago" is caused by a larger quantity having been dug on Crown Lands.

„ 6. RENTS, EXCLUSIVE OF LANDS.—The decrease under "Tolls" is chiefly attributable to the reduced traffic on the Kandy road. The increase under the head of "Government Buildings" is mainly owing to the Warehouse at St. John's River having been rented to the Municipality for £280 10*s.* 0*d.*

„ 7. LICENSES.—The decrease under "Arrack &c." is owing to the Farms in the North-Western Province having been collected in aumany for the year 1869-70, consequently a corresponding increase is shewn under the head "Sale of Government Property."

The decrease on account of "Stills" is in consequence of very few Stills having been licensed since distillation has been restricted to Stills of Galls. 150.

The decrease on account of Retail of Salt is owing to no adequate offer having been made for the Salt Rent of the Northern Province for 1869, the sale of which was therefore conducted in aumany.

„ 8. STAMPS.—There was a decrease of £3,016 under this head in 1868, owing to the depression of the money market and dullness of trade. In 1869 there is an increase of £2,506, which shews that trade has considerably improved. The increase on account of "Postage Stamps" is consequent on the increase of correspondence in the Island, and to an extension in the use of Postage Stamps.

„ 9. TAXES.—This decrease is so small that it hardly calls for explanation

„ 10. POSTAGE.—This decrease is evidently owing to Postage Stamps being now more generally used in lieu of direct money payments.

„ 11. FINES.—This decrease is owing to the Government Agent of the Northern Province having brought to credit in 1869 the sum of £1,400, being sale of confiscated Timber, under the head "Sale of Government Property" instead of Fines and Forfeitures.

„ 12. SALE OF GOVERNMENT PROPERTY.—Increase in "Salt and Arrack," the former is owing to the Rent of the Northern Province having been held in aumany, and the latter owing to the Arrack Farms of the North-Western Province having been retailed by the Government.

The increase on account of Timber is attributable to a larger quantity having been felled, principally in the Eastern Province; and also owing to the sale of a large quantity of confiscated Timber in the Northern Province having been brought to account in 1869, under this head of Service instead of "Fines and Forfeiters."

The decrease of £12,667 4*s.* 2*d.* on Colonial Stores, is chiefly owing to a large sum (nearly £14,000) having having been recovered in 1868 on account of Iron Bridges, whereas the amount recovered in 1869 did not exceed £2,000.

„ 13. REIMBURSEMENTS, &c.—The increase on account of Survey Fees is owing to a larger proportion of Plans having been prepared in 1869 than in the previous year.

The revenue under the other heads is of such a fluctuating nature that no specific cause can be assigned for the increase or decrease.

„ 14. MISCELLANEOUS.—The decrease on account of overpayments recovered is chiefly owing to a sum of £343 6*s.* 8*d.* recovered in 1868 from Railway Capital Fund, in repayment of expenses incurred on that account, from General Revenue, and also a sum of £677 received in 1868, being balance of the purchase of Steamer "Pearl." The decrease on account of the "Deficiency of Troops" is self-evident.

„ 15. INTEREST.—The increase of £708 11*s.* 3¼*d.* is owing to the recoveries of the arrears of former years in 1869.

The decrease on account of Indian Investments is in consequence of the withdrawal of moneys invested on Indian Government Securities.

„ 16. ELECTRIC TELEGRAPH.—This decrease is owing to the transfer of the Electric Telegraph Department to the Indian Government.

„ 17. PEARL FISHERY.—This decrease hardly calls for any observation.

„ 18. SPECIAL RECEIPTS.—The increase on Fees for Title Deeds is in consequence of the increased sale of Lands.

COMPARATIVE STATEMENT OF THE EXPENDITURE OF THE COLONY FOR THE YEARS 1868 AND 1869.

		Expenditure of 1868.	Expenditure of 1869.	Increase in 1869.	Decrease in 1869.
	ESTABLISHMENTS; INCLUDING FIXED, AND PROVISIONAL AND TEMPORARY SALARIES, ALLOWANCES, AND CONTINGENCILS.				
	CIVIL ESTABLISHMENTS.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1	The Governor	7584 9 10	7521 8 0	—	60 1 10
2	Colonial Secretary	15001 16 0	14020 4 11½	—	981 11 0½
3	Treasurer	1423 17 8½	4395 1 11½	—	28 15 8½
4	Auditor-General	1272 2 11	3779 12 8	—	492 10 3
5	Director of Public Work	35377 2 7	32992 17 8¼	—	2381 4 10¼
6	Surveyor-General	19159 16 6½	19994 5 2	834 8 7½	—
7	Botanic Garden	1478 9 3	1529 2 5	50 13 2	—
8	Loan Board	655 8 0	664 11 0	29 3 0	—
9	Electric Telegraph	6770 18 8	—	—	6770 18 8
10	Customs	14497 19 9	14101 19 5	—	396 0 4
11	Master Attendant	3658 6 1	3564 18 3	—	93 7 8
12	Post Offices	8238 17 2½	10023 13 0¾	1784 15 10¼	
13	Registrar-General of Lands	9989 0 8	10769 2 10	780 2 2	—
	Commissioner of Temple Lands	214 0 0	214 0 0	—	—
14	Inspector-General of Police	25074 19 3	26845 11 11	1770 19 8	—
15	Colonial Storekeeper	2373 12 2	2636 16 3	263 4 1	—
16	Inspector-General of Prisons	1234 11 7	1077 11 9	—	156 19 10
	Agents-General in London	525 0 0	525 0 0	—	—
	AGENTS OF PROVINCES.				
17	Western Province	10085 9 7½	10266 3 8	181 14 0½	—
18	North-Western Province	6693 3 10	6769 15 1½	76 11 3½	—
19	Southern do	7512 19 5	7376 8 3	—	136 11 2
20	Eastern do	4638 17 10	5317 11 0½	678 13 2½	—
21	Northern do	7721 0 5½	7887 3 7	166 3 1½	—
22	Central do	8750 14 9	8864 17 0	113 17 3	
	JUDICIAL ESTABLISHMENTS				
23	Judges of the Supreme Court	6695 10 0	6646 13 4	—	48 16 8
24	Queen's Advocate, Deputy Queen's Advocate, and Deputies to the Queen's Advocate	5240 7 2	5121 14 8	—	118 12 6
25	Registrar of the Supreme Court	2123 18 4	2132 17 2	8 18 10	—
	DISTRICT COURTS, POLICE COURTS, AND COURTS OF REQUESTS.				
26	In the Western Province	10646 4 1	10212 16 1½	—	433 7 11½
27	„ North-Western Province	3684 14 7½	3381 14 8¾	—	302 19 10¾
28	„ Southern do.	6695 4 5	6792 7 6	97 3 1	—
29	„ Eastern do.	2190 7 1	2389 18 6	199 11 5	—
30	„ Northern do	6038 1 5½	5888 9 3¼	—	149 12 2¼
31	„ Central do.	8873 1 3	8521 16 0	—	351 5 3
32	ECCLESIASTICAL ESTABLISHMENTS	10890 3 7	9904 17 3¼	—	985 6 3¾
33	EDUCATIONAL do	13207 12 0	14270 10 7	1062 18 7	
34	MEDICAL do.	15653 0 6½	16018 9 4	365 8 9¼	
	FISCALS IN THE PROVINCES.				
35	Western Province	5285 17 0	5485 15 6	199 18 6	—
36	North-Western Province	1359 0 5½	1320 1 11	—	38 18 6½
37	Southern do	2855 2 10	2670 11 1	—	184 11 9
38	Eastern do	709 9 6	730 3 9	20 14 3	—
39	Northern do.	1977 17 8	1962 12 4	—	15 5 4
40	Central do.	3414 0 10	3376 12 6	—	37 8 4
	£	313452 2 11¾	307969 15 7½	8684 18 11	14167 6 3¼

	Expenditure of 1868.	Expenditure of 1869.	Increase in 869.	Decrease in 1869.
SERVICES EXCLUSIVE OF ESTABLISHMENTS.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Pensions and Retired Allowances -	36240 14 6¼	40460 7 7¾	4219 13 1½	—
Revenue Service - -	14171 3 6¾	19834 5 2¼	5663 1 7½	—
Administration of Justice -	5247 13 1½	4800 12 3½	—	447 0 10
Ecclesiastical, in aid of Missions -	400 0 0	400 0 0	—	—
Charitable Allowances -	4410 7 9¼	3856 5 5	—	554 2 4¼
Education - -	1873 8 11½	2698 7 9½	824 18 10	—
Hospitals - -	11457 16 2¼	10735 14 3½	—	722 1 10¾
Police and Gaols -	24630 18 9¼	22679 2 11¼	—	1951 15 10
Rent - -	2931 11 3	1727 2 8	—	1204 8 7
Transport - -	16897 19 4	16098 5 6½	—	799 13 9½
Conveyance of Mails -	8338 3 9¼	8107 1 3	—	231 2 6¼
Works and Buildings -	16511 14 1¾	10540 11 5¼	—	5971 2 8½
Roads, Streets, and Bridges -	166592 0 9¼	123237 11 7¾	—	43354 9 1½
Miscellaneous - -	29765 18 2½	34712 18 11	4947 0 8½	—
Interest - - -	202 3 1	272 14 1	70 11 0	—
Colonial Store - -	88490 17 0½	40618 2 4¼	—	47872 14 7¾
Contribution towards Military Expenditure - -	160000 0 0	160000 0 0	—	—
Colonial Pay and Allowances -	935 2 5¼	551 8 6	—	383 13 11¼
Remd. of Duties, Drawbacks, &c. -	1681 3 1	1534 8 5¼	—	146 14 7¾
Lands taken for Government purposes -	669 10 0	608 6 6	—	61 3 6
Immigration - - -	5449 18 10½	5595 13 4½	145 14 6	—
Electric Telegraph - -	1595 10 11	—	—	1595 10 11
Revenue Establishments -	61573 4 0	63094 6 8	1521 2 8	—
Redemption of Dutch Credit Brieven -	71 5 7	—	—	71 5 7
Enquiry into the Cultivation of the Pearl Oyster - - -	1359 11 9	1240 0 0	—	119 11 9
	661497 17 1¼	573403 6 11¾	17392 2 5½	105486 12 7½
RECAPITULATION.				
Establishments - -	313452 2 11¼	307969 15 7½	—	5482 7 4¼
Services exclusive of Establishments -	661497 17 1¼	573403 6 11¾	—	88091 10 2
TOTAL £—	974950 0 1½	881373 2 7¼	—	93576 17 6¼

Audit Office,
Colombo, 25th May, 1870.

JOHN DOUGLAS,
Auditor-General.

EXPLANATORY STATEMENT OF THE FOREGOING.

	£ s. d.	£ s. d.	£ s. d.
1.—THE GOVERNOR.			
Decrease on Fixed Salaries - -	-	49 3 10	
Do. Office Contingencies - -	-	10 18 0	
Net Decrease -			60 1 10
2.—COLONIAL SECRETARY.			
Decrease on Provisional Salaries - -	- 33 3 8½		
Do. Office Contingencies -	- 1256 11 6½		
		1289 15 3	
Deduct Increase on Fixed Salaries - -	-	308 4 2½	
Net Decrease -			981 11 0½
3.—TREASURER.			
Decrease on Provisional Salaries - -	- 2 0 10		
Do. Allowances -	- 27 13 9¾		
Do. Office Contingencies - -	- 30 14 5		
		60 9 0¾	
Deduct Increase on Fixed Salaries - -	-	31 13 4	
Net Decrease -			28 15 8¾

	£ s. d.	£ s. d.	£ s. d.
4.—Auditor-General.			
Decrease on Fixed Salaries - -	- 396 5 0		
Do. Office Contingencies - -	- 129 0 7		
		525 5 7	
Deduct Increase on Fixed Salaries - -	- -	32 15 4	
Net Decrease -			492 10 3
5.—The Director of Public Works.			
Decrease on Fixed Salaries - -	- -	696 9 0	
Do. Provisional do. - -	- -	217 9 10¾	
Do. Office Contingencies - -	- -	1470 5 11½	
Net Decrease -			2384 4 10¼
6.—Surveyor-General.			
Increase on Provisional Salaries - -	- 291 1 10		
Do. Office Contingencies - -	- 764 4 1½		
		1055 5 11½	
Deduct decrease on Fixed Salaries - -	- 122 12 4		
Do. Allowances - -	- 98 5 0		
		220 17 4	
Net Increase -			834 8 7½
7.—Botanic Garden.			
Increase on Fixed Salaries - -	30 3 8		
Do. Provisional do. - -	35 7 9		
		65 11 5	
Deduct decrease on Office Contingencies -	- -	14 18 3	
Net Increase -			50 13 2
8.—Loan Board.			
Increase on Office Contingencies - -	- -	29 3 0	
9.—Electric Telegraph.			
Decrease - - -	- -		6770 18 8
is owing to the transfer of the Telegraph Department to the Indian Government.			
10.—Customs.			
Decrease on Fixed Salaries - -	- -	120 15 5	
Do. Provisional Salaries - -	- -	25 4 7	
Do. Office Contingencies - -	- -	250 0 4	
Net Decrease -			396 0 4
11.—Masters Attendant.			
Decrease on Fixed Salaries - -	- -	20 16 10	
Do. Provisional do. - -	- -	33 16 8	
Do. Office Contingencies - -	- -	38 14 4	
Net Decrease -			93 7 10
12.—Post Office.			
Increase on Provisional Salaries - -	- 1252 5 11		
Do. Office Contingencies - -	- 554 10 8¼		
		1806 16 7¼	
Deduct decrease on Fixed Salaries - -	- 13 0 9		
Do. Allowances - -	- 9 0 0		
		22 0 9	
Net Increase -			1784 15 10¼
13.—Registrar-General of Lands.			
Increase on Provisional Salaries - -	- 77 9 0		
Do. Allowances - -	- 1032 16 0		
		1110 5 0	
Deduct decrease on Office Contingencies -	- -	330 2 10	
Net Increase -			780 2 2
14.—Inspector-General of Police.			
Increase on Fixed Salaries - -	- 11 19 1		
Do. Provisional do. - -	- 1748 7 3		
Do. Allowances - - -	- 31 14 11		
		1792 1 3	
Deduct decrease on Office Contingencies	- -	21 1 7	
Net Increase -			1770 19 8

	£ s. d	£ s. d.	£ s. d
15.—Colonial Storekeeper.			
Increase on Provisional Salaries - -	- -	263 4 1	
16.—Inspector-General of Prisons.			
Decrease on Provisional Salaries - -	- -	154 15 10	
Do. Office Contingencies - -	- -	2 4 0	
	Net Decrease -		156 19 10
17.—Government Agent, Western Province.			
Increase on Fixed Salaries - -	- 221 0 9½		
Do. Provisional - -	- 190 15 8		
		411 16 5½	
Deduct Decrease on Allowances - -	- 87 15 0		
Do. Office Contingencies- -	- 142 7 5		
		230 2 5	
	Net Increase -		181 14 0½
18.—Government Agent, North-Western Province.			
Increase on Provisional Salaries - -	- 124 16 10¾		
Do. Office Contingencies - -	- 11 7 10¼		
		136 4 9	
Deduct Decrease on Fixed Salaries - -	- -	59 13 6	
	Net Increase -		76 11 3½
19.—Government Agent, Southern Province.			
Decrease on Provisional Salaries - -	- 212 1 8		
Do. Allowances - -	- 0 15 0		
Do Contingencies - -	- 19 1 7		
		231 18 3	
Deduct Increase on Fixed Salaries - -	- -	95 7 1	
	Net Decrease -		136 11 2
20.—Government Agent, Eastern Province.			
Increase on Fixed Salaries - -	- -	704 10 10	
Deduct Decrease on Provisional Salaries -	- 24 15 0		
Do. Office Contingencies- -	- 1 2 7½		
		25 17 7½	
	Net Increase -		678 13 2½
21.—Government Agent, Northern Province.			
Increase on Fixed Salaries - -	- 193 19 5½		
Do. Office Contingencies - -	- 10 3 6		
		204 2 11½	
Deduct decrease on Provisional Salaries -	- 13 12 4		
Do. Allowances - -	- 24 7 6		
		37 19 10	
	Net Increase -		166 3 1½
22.—Government Agent, Central Province.			
Increase on Fixed Salaries - -	- -	50 17 5	
Do. Provisional Salaries - -	- -	23 3 2	
Do. Office Contingencies - -	- -	39 16 8	
	Net Increase -		113 17 3
23.—Judges of the Supreme Court.			
Decrease on Fixed Salaries - -	- -	48 16 8	
24.—Queen's Advocate			
Decrease on Fixed Salaries - -	- 138 14 2		
Do. Office Contingencies - -	- 10 6 4		
		149 0 6	
Deduct Increase on Provisional Salaries -	- -	30 8 0	
	Net Decrease -		118 12 6
25.—Registrar, Supreme Court.			
Increase on Fixed Salaries -	- 3 0 4		
Do. Office Contingencies - -	- 6 2 6		
		9 2 10	
Deduct Decrease on Provisional Salaries -	- -	0 4 0	
	Net Increase -		8 18 10

26.—District Courts, Police Courts, and Courts of Requests.			
Western Province.	£ s. d.	£ s. d.	£ s. d.
Decrease on Fixed Salaries - -	- 312 7 11½		
Do. Provisional Salaries - -	- 149 3 10		
		461 11 9½	
Deduct Decrease on Office Contingencies	- -	28 3 10	
Net Decrease -			433 7 11½
27.—North-Western Province.			
Decrease on Provisional Salaries - -	- 291 17 0¼		
Do. Office Contingencies - -	- 25 14 6½		
		317 11 6¾	
Deduct Increase on Fixed Salaries - -	- -	14 11 8	
Net Decrease -			302 19 10¾
28.—Southern Province.			
Increase on Fixed Salaries - -	- 151 17 6		
Do. Office Contingencies - -	- 7 12 0		
		159 9 6	
Deduct Decrease on Provisional Salaries -	- -	62 6 5	
Net Increase			97 3 1
29.—Eastern Province.			
Increase on Fixed Salaries - -	- -	177 1 8	
Do. Provisional Salaries - -	- -	12 15 9	
Do. Office Contingencies - -	- -	9 14 0	
Net Increase -			199 11 5
30.—Northern Province.			
Decrease on Fixed Salaries - -	- -	91 17 1½	
Do. Provisional Salaries - -	- -	33 4 2	
Do. Office Contingencies - -	- -	24 10 10¾	
Net Increase -			149 12 2¼
31.—Central Province.			
Decrease on Fixed Salaries - -	- 447 2 6		
Do. Office Contingencies - -	- 14 8 9		
		461 11 3	
Deduct Increase on Provisional Salaries -	- -	110 6 0	
Net Decrease -			351 5 3
32.—Ecclesiastical Establishment.			
Decrease on Fixed Salaries - -	- 983 18 11		
Do. Provisional Salaries - -	- 37 8 8		
		1021 7 7	
Deduct Increase on Allowances - -	- -	36 1 3¼	
Net Decrease -			985 6 3¾
33.—Education.			
Increase on Provisional Salaries - -	- -	1138 5 2	
Deduct Decrease on Fixed Salaries - -	- -	75 6 7	
Net Increase -			1062 18 7
34.—Medical.			
Increase on Provisional Salaries - -	- 171 6 1¾		
Do. Office Contingencies - -	- 452 2 2		
		623 8 3¾	
Deduct Decrease on Fixed Salaries - -	- 202 19 6½		
Do. Allowances - -	- 55 0 0		
		257 19 6½	
Net Increase -			365 8 9¼
35.—Fiscals in the Provinces, Western Province			
Increase on Provisional Salaries - -	- -	221 2 10	
Deduct Decrease on Fixed Salaries -	- 9 19 5		
Do. Office Contingencies -	- 11 4 11		
		21 4 4	
Net Increase -			199 18 6
36.—North-Western Province.			
Decrease on Office Contingencies - -	- -	57 9 11½	
Deduct Increase on Fixed Salaries -	- 6 3 9		
Do. Provisional do - -	- 12 7 8		
		18 11 5	
Net Increase -			38 18 6½
37.—Southern Province.			
Decrease on Office Contingencies - -	-	213 5 8	
Deduct Increase on Fixed Salaries -	- 4 3 4		
Do. Provisional do. - -	- 24 10 7		
		28 13 11	
Net Decrease -			184 11 9

	£ s. d.	£ s. d.	£ s. d.
FISCALS IN THE PROVINCES.— *continued.*)			
38.—EASTERN PROVINCE.			
Increase on Provisional Salaries - - -	5 5 0		
Do. Office Contingencies - - -	19 12 7		
		24 17 7	
Deduct Decrease on Fixed Salaries - -	-	4 3 4	
Net Increase -			20 14 3
39.—NORTHERN PROVINCE.			
Decrease on Fixed Salaries - - -	12 15 9½		
Do. Provisional Salaries - - -	2 12 2¾		
		15 8 0¼	
Deduct Increase on Office Contingencies -	-	0 2 8¼	
Net Decrease -			15 5 4
40.—CENTRAL PROVINCE.			
Decrease on Provisional Salaries - - -	7 6 10		
Do. Office Contingencies - - -	30 19 5		
		38 6 3	
Deduct Increase on Fixed Salaries - -	-	0 17 11	
Net Decrease -			37 8 4

PENSIONS.—This increase is attributable to the retirement on pension of a greater number of Public Servants in 1869 than in the previous year.

REVENUE SERVICE.— This increase is owing to the Arrack Rent of the North-Western Province having been retailed by Government, which rendered necessary the purchase of a large quantity of arrack, and the payment of Commission to Retailers, &c.

ADMINISTRATION OF JUSTICE.—The decrease is owing to a smaller expenditure having been incurred in 1869, on account of witnesses attending the Supreme Court than in the previous year.

CHARITABLE ALLOWANCE.—The decrease is chiefly owing to an expenditure in 1868 of £325 on account of the relief of Distress and Sickness in the Western Province, which did not occur in 1869.

EDUCATION.—This increase is owing to the re-organisation of the Educational Department.

HOSPITALS.—This decrease is owing to a reduction in the number of Patients admitted to Hospitals.

POLICE AND GAOLS.—The decrease is owing to the statement of expenses on account of the Convicts at Malacca not having been received from the Government of the Straits Settlements.

RENT.— This decrease is owing to the Rent of School-Houses having been classed under the head of "Education exclusive of Establishment," instead of Rent, as in former years.

TRANSPORT.—This Decrease is principally owing to the transfer of the Telegraph Department to the Indian Government, which reduced the expenditure under this head to the extent of £528.

CONVEYANCE OF MAILS.—The decrease is owing to the payment hitherto made under this head having been transferred in 1869 to that of "Provisional Salaries."

WORKS AND BUILDINGS, AND ROADS, STREETS AND BRIDGES.—The decrease under these heads are in consequence of smaller votes having been taken in the Supply Bill for 1869 than in the previous year. In 1868 several works of magnitude were executed, such as the road from Mawenelle to Rambookan Railway Station, which cost £18,500; several Iron Lattice Bridges, amounting to £14,000 were also paid for in 1868. These and other large sums expended in that year will account for the decrease in 1869.

MISCELLANEOUS.—This increase is owing to a sum of £13,175 2*s.* 4*d.* having been brought to account in 1869, on account of men raised in the Punjaub for the Ceylon Pioneer Corps in the year 1863.

INTEREST.—The increase under this head hardly calls for any remark.

COLONIAL STORE.—This decrease is attributable to a smaller expenditure incurred by the Crown Agents in 1869 than in the previous year.

COLONIAL PAY AND ALLOWANCES.—This decrease is owing to the salary of the Aid-de-Camp to the Governor not having been drawn during the absence from the Colony of the Governor, and also to the remission of duty on Beer, &c., consumed by soldiers having been discontinued.

LANDS TAKEN FOR GOVERNMENT PURPOSES AND IMMIGRATION.—The decrease in the former, and the increase in the latter, hardly call for any observation.

ELECTRIC TELEGRAPH.—This decrease is owing to the Telegraph Department having been transferred to the Indian Government.

RAILWAY LIABILITIES.—Although there was a decrease of £4,523 on Export Duty in 1869, there is yet an increase of £1,521 under this head, in consequence of a larger amount of that duty having been funded in 1869 than in 1868. This arises from the amount funded in 1868 having comprised the collections of the first eleven months of that year only, whereas the balance funded in 1869 included, in addition to the twelve months' collections of that year, those of the concluding month of the one before.

REDEMPTION OF DUTCH CREDIT BRIEVEN, AND ENQUIRY INTO THE CULTIVATION OF PEARL OYSTERS.—The decrease under these heads hardly calls for any remark.

JOHN DOUGLAS,
Auditor-General.

STATEMENT shewing the ASSETS and LIABILITIES of the Ceylon Government, on the 31st December, 1869.

ASSETS.	£	s.	d.	£	s.	d.
Cash in the General Treasury and in the District Chests - -	89474	3	3¼			
Amount due by the Bombay Government - - -	264	0	0			
Investment, in Indian Government 5½ per cent. Stock, at Market rate -	237699	0	0			
Investments in the Colonial Banks - - -	100000	0	0			
Advances outstanding, made on account of Revenue and Expenditure of 1870 -	3053	0	0			
Amount advanced to the Naval Storekeeper by the Government Agent, Trincomalee	3000	0	0			
Amount due by the Government of New Zealand - -	35	1	6			
Crown Agents Account Current, 31st December, 1869 - -	15386	16	2½			
Bronze Coin in transit to England - - -	4820	0	0			
Amount of Surcharges outstanding (estimated) - - -	3000	0	0			
Amount of Arrears of Revenue outstanding, £102,000, of which estimated as recoverable	66000	0	0			
				522732	0	11¾
LIABILITIES.						
To Sinking Fund - - - -	106750	7	9			
Unavailable Deposits - - - -	144351	11	3½			
Her Majesty's Government - - - -	370	0	6			
To Indian Government (estimated) - - -	71000	0	0			
Unexpended balances on Votes for Public Works carried forward for Expenditure in 1870. - - - -	11273	8	10¾			
Do. Under Surplus Funds Ordinance - -	13886	5	0			
Balance of amount transferred from Loan Board, under Article 2 of Ordinance No. 3 of 1867, and available only for Special Works - -	21734	3	2			
Drafts outstanding - - - -	13853	2	5½			
				383218	19	0¾
Balance in favour of the Ceylon Government £	—			139513	1	11

Audit Office,
Colombo, 17th April, 1870.

JOHN DOUGLAS,
Auditor-General.

STATEMENT OF CASH TRANSACTIONS FOR THE YEAR 1869.

	£	s.	d.	£	s.	d.
Balance on the 1st January, 1869				94,878	16	4¼
Gross Revenue of the year, viz :—						
In Ceylon	946,094	15	5¾			
England	400	2	10			
				946,494	18	3¾
Amount of Drafts drawn during the year				617,240	17	8½
Do. Deposits do.				1,051,230	4	9½
Do. Advances recovered				284,279	18	0
Do. Remittances do.				354,219	13	10¼
Sums placed to the credit of H. M. Government				164,282	13	0
Do. Crown Agents				51,713	11	2¼
Do. Indian Government				28,277	1	0¼
Do. Government of Victoria				53	3	0
Do. do. New Zealand				27	9	0
Do. Agents at Madras				474	17	7¾
Do. do. Bombay				2,318	11	6
Do. do. Calcutta				15	5	3
Receipts by the Crown Agents (other than revenue)				882	6	6
Amount overdrawn at Newera Eliya				110	13	7
Receipts by the Crown Agents for the General Service of the Colony				152,760	19	3
Indian investments withdrawn and premiums on account				27,966	10	0
Ceylon do				5,000	0	0
Repayment of advances on account of Abyssinian Expedition				2,200	0	0
			£	3,784,427	10	0½

	£	s.	d.	£	s.	d.
Gross Expenditure of the year, viz.:—						
On the Votes of the year						
In Ceylon	823,031	15	0¼			
England	58,341	7	7			
On account of Public Works charged on Balances	47,706	9	6¼			
Do. Surplus Funds	31,725	0	6¾			
				960,804	12	8¼
Deposits				924,469	5	6
Drafts paid				625,124	16	0¼
Remittances				354,583	5	10
Advances				290,629	13	11¾
Sums placed to the debit of H. M. Government				164,227	6	6
Do. Indian do.				11,749	3	9¼
Do. Government of Victoria				53	3	0
Do. do. New Zealand				62	10	6
Do. Crown Agents				159,718	15	7
Do. Agents, Madras				474	17	7¾
Do. do. Bombay				2,318	11	6
Do. do. Calcutta				15	5	3
Paper Currency Destroyed				19	18	0
Balance due to the Crown Agents on the 1st January, 1869				29,170	15	8
Payment by the Crown Agents on account of charges recoverable in the Colony				49,603	3	4
Investment in Ceylon in the Local Bank				105,000	0	0
Balance, 31st December, 1869				106,402	5	3¼
			£—	3,784,427	10	0½

Audit Office,
Colombo, 16th May, 1870.

JOHN DOUGLAS,
Auditor-General.

No. 1.

STATEMENT shewing the REVENUE and EXPENDITURE of the Colony of Ceylon for the first Six Months of 1870.

REVENUE.	Amount. £	s.	d.
Arrears of Revenue of former years recovered	19,607	3	2¾
Revenue of the Current Year.			
Customs	132,915	14	3
Port and Harbour Dues	4,266	11	4
Land Sales	15,307	15	0
Land Revenue	46,444	4	7
Rents, exclusive of Land	16,902	17	10
Licenses	66,773	15	2¾
Stamps	37,844	8	9½
Taxes—Assessment on Houses and Gardens	1,462	10	6¾
Postage	1,202	14	6
Fines and Forfeitures	3,023	6	8½
Government Vessels	—		
Sale of Government Property	57,651	9	7
Reimbursements in aid of Expenses incurred by Government	11,818	17	6¼
Interest	9,266	8	9¾
Miscellaneous	2,999	15	[illegible]
Special Receipts	348	18	7½
Ration Stoppages from Her Majesty's Troops	—		
Pearl Fishery	17	4	6
Receipts by the Colonial Agents in London	321	2	11
Railway Receipts	103,735	7	0
Total—£	531,910	6	3

EXPENDITURE.	Amount. £	s.	d.
Establishments.			
Fixed Salaries	102,641	2	10¼
Provisional and Temporary Salaries	46,261	15	9
Allowances	3,468	9	11¼
Office Contingencies	6,151	13	8½
Services, exclusive of Establishments.			
Pensions and Retired Allowances	24,063	15	4
Revenue Services	10,062	15	11¾
Administration of Justice	1,850	17	2½
Ecclesiastical	100	0	0
Charitable Allowances	1,946	7	3
Education	635	0	5
Hospitals	5,162	3	11
Police and Gaols	8,180	7	1½
Rent	1,276	0	6
Transport	8,267	16	9
Conveyance of Mails	4,550	16	6
Works and Buildings	3,638	13	7¾
Roads, Streets, and Bridges	55,457	12	2¾
Miscellaneous	11,708	13	2¾
Interest	258	9	10
Colonial Stores	42,361	9	6
Contribution towards Military Expenditure	80,000	0	0
Colonial Pay and Allowances	—		
Government Vessels	—		
Refund of Duties	248	9	5
Lands taken for Government purposes	75	0	0
Immigration	2,620	19	0¼
Enquiry into the Cultivation of the Pearl Oyster	500	0	0
Electric Telegraph	—		
Railway Services: Contribution to Sinking Fund	20,658	3	0
Railway Services: Other Services	18,916	9	4
	461,063	2	5½
Excess of Revenue over Expenditure—£	70,847	3	9½
Total—£	531,910	6	3

Audit Office,
Colombo, 27th September, 1870.

JOHN DOUGLAS,
Auditor-General.

No. 2.

COMPARATIVE STATEMENT of the REVENUE and EXPENDITURE of the Colony of Ceylon for the first Six Months of 1869 *and* 1870.

REVENUE.	1st Six Months of 1869. £ s. d.	1st Six Months of 1870. £ s. d.	Increase. £ s. d.	Decrease. £ s. d.
Arrears of Revenue of former years recovered ..	24,931 2 11½	19,607 3 2¾	—	5,323 19 8¾
Revenue of the Current Year.				
Customs ..	159,935 9 4	132,915 14 3	—	27,019 15 1
Port and Harbour Dues ..	3,633 10 5	4,266 11 4	633 0 11	—
Land Sales ...	15,602 18 8½	15,307 15 0	—	295 3 8½
Land Revenue	42,207 6 9¼	46,444 4 7	4,236 17 9¾	—
Rents, exclusive of Land	15,417 12 4	16,902 17 10	1,485 5 6	—
Licenses .	68,036 8 10	66,773 15 2¼	—	1,262 13 7¾
Stamps ..	38,015 18 11	37,844 8 9½	—	171 10 1½
Taxes—Assessment on Houses and Gardens ...	1,092 19 9¼	1,462 10 6¾	369 10 9½	—
Postage	1,253 4 11	1,202 14 6	—	50 10 5
Fines and Forfeitures	3,444 5 2½	3,023 6 8½	—	420 18 6
Government Vessels ...	—	—	—	—
Sale of Government Property	60,339 5 9½	57,651 9 7	—	2,687 16 2½
Reimbursements in aid of Expenses incurred by Government	11,284 10 6	11,818 17 6¼	534 7 0¼	—
Interest . .	8,129 11 8¼	9,266 8 9¾	1,136 17 1½	—
Miscellaneous	2,878 15 6	2,999 15 3¾	120 19 9¾	—
Special Receipts . .	445 3 9	348 18 7½	—	96 5 1½
Ration Stoppages from Her Majesty's Troops ..	—	—	—	—
Pearl Fishery ..	18 17 6	17 4 6	—	1 13 0
Receipts by the Colonial Agents in London ..	378 5 5	321 2 11	—	57 2 6
Railway Receipts	—	103,735 7 0	103,735 7 0	—
Electric Telegraph ..	5,920 5 1	—	—	5,920 5 1
£	462,965 13 4¼	531,910 6 3	112,252 5 11¾	43,307 13 1½
		Deduct Decrease	43,307 13 1½	
		Net Increase .. £	68,944 12 10¼	

EXPENDITURE.	1st Six Months of 1869. £ s. d.	1st Six Months of 1870. £ s. d.	Increase. £ s. d.	Decrease. £ s. d.
Establishments.				
Fixed Salaries .	80,854 4 5	102,641 2 10¼	21,786 18 5¼	—
Provisional and Temporary Salaries	47,637 18 1	46,261 15 9	—	1,376 2 4
Allowances . .	2,508 17 3½	3,468 9 11¼	959 12 7¾	—
Office Contingencies ..	5,584 1 4	6,151 13 8¾	567 12 4¾	—
Services, exclusive of Establishments.				
Pensions and Retired Allowances	20,525 13 6½	24,063 15 4	3,538 1 9¾	—
Revenue Services	7,228 11 5½	10,062 15 11¾	2,834 4 6¼	—
Administration of Justice	2,271 3 0	1,850 17 2½	—	420 5 9½
Pensions ..	—	100 0 0	100 0 0	—
Charitable Allowances ..	1,995 18 3	1,946 7 3	—	49 11 0
Education	60 10 2	635 0 5	574 10 3	—
Hospitals .	5,146 16 8	5,162 3 11	15 7 3	—
Police and Gaols ..	11,928 18 3	8,180 7 1½	—	3,748 11 1½
Rent .	767 17 6	1,276 0 6	508 3 0	—
Transport	7,726 19 6	8,267 16 9	540 17 3	—
Conveyance of Mails	3,246 11 1	4,550 16 6	1,304 5 5	—
Works and Buildings .	1,286 0 6½	3,638 13 7¾	2,352 13 1¼	—
Roads, Streets, and Bridges ..	34,297 11 9	55,457 12 2¾	21,160 0 5¾	—
Miscellaneous ...	19,494 10 0½	11,708 13 2¾	—	7,785 16 9¾
Interest . .	193 16 0	258 9 10	64 13 10	—
Colonial Stores .	18,401 1 0½	42,361 9 6	23,960 8 5½	—
Contribution towards Military Expenditure .	80,000 0 0	80,000 0 0	—	—
Colonial Pay and Allowances	131 1 4½	—	—	131 1 4½
Railway Liabilities	39,885 5 5	—	—	39,885 5 5
Refunded Duties	112 16 8	248 9 5	135 12 9	—
Lands taken for Govt purposes	75 19 0	75 0 0	—	0 19 0
Immigration	2,641 1 5½	2,620 19 0¼	—	20 2 5
Enquiry into the Cultivation of the Pearl Oyster .	740 0 0	500 0 0	—	240 0 0
Railway Services { Contribution to Sinking Fund	—	20,658 3 0	20,658 3 0	—
Railway Services { Other Services	—	18,916 9 4	18,916 9 4	—
	394,743 3 7¼	461,093 2 5½	119,977 13 11½	53,657 15 1¼
		Deduct Decrease	53,657 15 1¼	
		Net Increase... £	66,319 18 10¼	

Audit Office,
Colombo, 27th September, 1870.

JOHN DOUGLAS,
Auditor-General.

FINANCIAL STATEMENTS.

No. 3.

COMPARATIVE STATEMENT of the Estimated and Actual REVENUE and EXPENDITURE of the Colony of Ceylon, for the first Six Months of 1870.

REVENUE.	Estimated Amount.	Actual Amount.	Increase.	Decrease.
	£ s. d.	£ s. d.	£ s. d	£ s. d.
Arrears of Revenue of former years recovered	14,500 0 0	19.607 3 2¾	5.107 3 2¾	—
Revenue of the Current Year.				
Customs ..	120,000 0 0	132.915 14 3	12.915 14 3	—
Port and Harbour Dues	3,600 0 0	4,266 11 4	666 11 4	—
Land Sales ..	17.750 0 0	15.307 15 0	—	2.442 5 0
Land Revenue .	52,500 0 0	46.444 4 7	—	6.055 15 5
Rents, exclusive of Land	17.750 0 0	16 902 17 10	—	847 2 2
Licenses . . .	72,500 0 0	66.773 15 2¾	—	5,726 4 9¾
Stamps ..	38,750 0 0	37.844 8 9½	—	905 11 2½
Taxes, Assessment on Houses and Gardens	2,000 0 0	1.462 10 6¼	—	537 9 5¾
Postage ..	1,150 0 0	1.202 14 6	52 14 6	—
Fines and Forfeitures	3.250 0 0	3.023 6 8½	—	226 13 3½
Government Vessels .	—	—	—	—
Sale of Government Property ...	70,000 0 0	57,651 9 7	—	12.348 10 5
Reimbursements in aid of Expenses incurred by Government ...	14.000 0 0	11.818 17 6¼	—	2.181 2 5¾
Interest .	7,500 0 0	9,266 8 9¾	1,766 8 9¾	—
Miscellaneous	12,500 0 0	2,999 15 3¾	—	9.500 4 8¼
Special Receipts .	350 0 0	348 18 7½	—	1 1 4½
Ration Stoppages from Her Majesty's Troops	—	—	—	—
Pearl Fishery ..	—	17 4 6	17 4 6	—
Receipts by the Colonial Agents in London ..	250 0 0	321 2 11	71 2 11	—
Railway Receipts ..	94.500 0 0	103.735 7 0	9,235 7 0	—
	542,850 0 0	531,910 6 3	29.832 6 6½	40.772 0 3½
			Deduct Increase	29.832 6 6½
			Net Decrease £	10.939 13 9

EXPENDITURE.	Estimated Amount	Actual Amount.	Increase.	Decrease.
	£ s. d.	£ s. d.	£ s. d	£ s. d.
Establishments.				
Fixed Salaries .. .	106 745 8 0	102.641 2 10¼	—	4,104 5 1¾
Provisional and Temporary Salaries	54 755 18 6	46..61 15 9	—	8,494 2 9
Allowances	3,858 2 1	3,468 9 11¼	—	389 12 1¾
Office Contingencies . .	11.193 1 7½	6.151 13 8¼	—	5,047 7 10¾
Services, exclusive of Establishments				
Pensions and Retired Allowances	20,356 15 3¼	24,053 15 4	3.697 0 0½	—
Revenue Services ...	12 100 9 1½	10,062 15 11¼	—	2,037 13 10¾
Administration of Justice . .	3 241 0 6	1,850 17 2½	—	1.390 3 3½
Ecclesiastical ..	200 0 0	100 0 0	—	100 0 0
Charitable Allowances . .	2 294 10 0	1.946 7 3	—	348 2 9
Education	3,529 15 0	635 0 5	—	2.894 14 7
Hospitals .. .	7,810 16 0	5,162 3 11	—	2 648 12 1
Police and Gaols	9,782 17 6	8 180 7 1½	—	1.602 10 4½
Rent .	1 389 11 0	1.276 0 6	—	113 10 6
Transport ..	9 008 13 2	8,267 18 9	—	1.701 16 5
Conveyance of Mails	4 8 3 11 9	4 559 14 6	—	252 15 3
Works and Buildings .	13 304 0 0	3 638 1 7¼	—	9.670 6 4¼
Roads, Streets and Bridges .	94,770 0 0	55,457 12 4½	—	39.312 7 9½
Miscellaneous .	14,382 18 6	11 708 13 2¼	—	2.6-4 5 3¼
Interest . . .	130 13 9	258 9 1	127 15 1	—
Colonial Stores	187 0 0 0	42 361 9 6	23,631 9 6	—
Contribution towards Military Expenditure . . .	80,000 0 0	80,000 0 0	—	—
Colonial Pay and Allowances .	—	—	—	—
Government Vessels	5,000 0 0	—	—	5,000 0 0
Refund of Duties .	191 18 6¾	248 9 5	56 11 1¼	—
Lands taken for Government purposes	1,110 0 0	75 0 0	—	1.035 0 0
Immigration . .	3.106 12 0	2.620 19 0¼	—	485 12 11¾
Enquiry into the Cultivation of the Pearl Oyster ...	380 0 0	500 0 0	120 0 0	—
Railway Services { Contribution to Sinking Fund ...	29.000 0 0	20.658 3 0	—	8.341 17 0
Railway Services { Other Services .	28,696 0 0	18.916 9 4	—	9.779 10 8
	540.803 12 10¼	461.063 2 5½	27.632 16 8¾	107.374 7 1½
			Deduct Increase	27.632 16 8¾
			Net Decrease. £	79,741 10 4¾

Audit Office.
Colombo, 27th September, 1870.

JOHN DOUGLAS,
Auditor-General.

REVENUE.	£	s.	d.
Arrears of Revenue of former years ..	22,000	0	0
Customs	246,000	0	0
Port and Harbour Dues	8,000	0	0
Land Sales	39,000	0	0
Land Revenue .	105,000	0	0
Rents, exclusive of Land . ..	56,000	0	0
Licenses	148,000	0	0
Stamps .. .	76,500	0	0
Taxes	4,000	0	0
Postage	2,600	0	0
Fines, Forfeitures and Fees of Court .	7,100	0	0
Government Vessels . ..	4,000	0	0
Sale of Government Property ..	126,000	0	0
Reimbursements in aid of Expenses incurred by Government ..	29,600	0	0
Miscellaneous Receipts	25,000	0	0
Interest	19,000	0	0
Pearl Fishery	...		
Special Receipts	700	0	0
Receipts by the Crown Agents in London	500	0	0
Railway Receipts	216,000	0	0
	1,115,000	0	0
Draft from Balances	26,722	0	0
Do. Surplus Funds	50,000	0	0
Do. Loan Board Funds	19,866	19	6
Total £—	1,211,588	19	6

EXPENDITURE.	£	s.	d.	£	s.	d.	£	s.	d.
Charges sanctioned by Ordinance No. 1 of 1870.									
Establishments.									
Civil	116,541	19	6						
Judicial	63,600	10	0						
Ecclesiastical	8,720	0	0						
Public Instruction . . .	4,175	0	0						
Medical	10,920	4	6						
Police	2,530	0	0						
Prisons	2,798	0	0						
Colonial Store	2,630	2	6						
				211,915	16	0			
Sanctioned by Ordinance No. 12 of 1867.									
Contribution towards Military Expenditure				160,000	0	0			
Sanctioned by Ordinance No. 9 of 1869.									
Railway Sinking Fund				58,000	0	0			
							429,915	16	0
Charges voted by the Legislative Council in Appropriation Ordinance for 1871				..			683,523	12	9
							1,113,439	8	9
Deduct probable savings in the above disbursements				..		..	10,000	0	0
							1,103,439	8	9
Works charged on Balances				..		..	26,722	0	0
Do. Surplus Funds				..		..	50,000	0	0
Do. Loan Board Funds				..		..	19,866	19	6
							1,200,028	8	3
Surplus Revenue				..		..	11,560	11	3
					Total £—		1,211,588	19	6

Council Chamber,
Colombo, 14th January, 1871.

HENRY T. IRVING,
Colonial Secretary.

BENGAL SECRETARIAT LIBRARY.